

## Added Income Seen For Signers of Soil Bank Contract

**Farmers Expect to  
Plant Substitute  
Crops This Season**

By JOHN CIPPERLY  
Croplife Washington Correspondent

WASHINGTON, D.C.—Despite the operations of the soil bank, purpose of which is to reduce production of certain crops, it is clear from information available in the Capital that there will be little if any diminution of acreage in field crops this year.

In an appearance before the House sub-committee on agriculture appropriations Marvin McLain, assistant secretary, admitted to the committee that while soil bank sign-ups are estimated at nearly 26 million acres in the acreage reserve program, this figure does not accurately reflect acreage reduction of plantings actually made in the field crop areas of the basic commodities covered by the soil bank.

Mr. McLain told the committee that something less than half of the sign-up would mean actual removal of field crops from planting and would also represent a shift

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## Screw-worm Control Pilot Field Tests Begin in Florida

WASHINGTON — Pilot-type field tests to evaluate and improve procedures and equipment for screw-worm eradication by using sterile male screw-worm flies have been started in a 2,000-square-mile area of Florida, it was announced May 7 by the U.S. Department of Agriculture and the Florida Livestock Board.

Screw-worms are the larvae, or maggots, of the fly *Callitroga hominivorax* which develop from eggs laid on open wounds on animals. They cause heavy losses to producers of livestock in infested areas, especially in Florida and Texas.

In the Florida tests, to be undertaken primarily for research and training purposes, researchers and technicians will be using basic techniques that successfully wiped out the screw-worm on the 170-square-mile Caribbean island of Curacao in 1954.

The cooperative investigations to be undertaken in Florida constitute another step toward developing use of sterile male screw-worm flies to rid the southeastern U.S. of this destructive livestock pest, USDA said. Although the primary purpose of the study is to develop improved methods, it is expected that some relief from screw-worm losses will result in the experimental area.

A total of about 2,000,000 laboratory-reared screw-worm flies a week will be required when the pilot-scale field operations reach their peak. These flies, rendered sterile by radioactive treatment, will be released at the rate of 500 males per square mile each week for four months on a pre-determined pattern that will insure

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## NPFI, Road Builders to Push Proper Fertilization Of New Highway Network

WASHINGTON—From 250,000 to 400,000 tons of fertilizer could be used effectively for the initial establishment of turf and shrubbery on the new 41,000 mile national highway system, according to a joint statement released here last week by the National Plant Food Institute and the American Road Builders Assn.

Another 125,000 tons of fertilizer would be needed annually for proper maintenance.

The task force on roadside development of the Institute's Research and

Education Committee and the association's Committee on Roadside Construction and Maintenance have joined hands in "an educational job of teaching contractors and others the virtues of sound fertilizing practices in establishment and maintenance of good turf and ornamentals" on the new road network, the statement said.

They point out that the new network will connect all principal metropolitan areas, cities and industrial centers and eventually will be joined to the 200,000 miles of primary state roads and the 500,000 miles of secondary roads linking farms and smaller communities. This new highway system will cost upwards of 50 billion dollars and will require 13 years to finish.

"Not only business and truckers, but everyone in the country will benefit from this new road program," the committees emphasized.

A recent survey of state highway department practices made by the Fertilizer and Mulch Committee of the American Road Builders Assn., based on replies from 41 states shows:

Nearly all states use some fertilizer to establish turf and ornamentals;

Eight states recommend the use of fertilizer for maintenance, while an additional 20 states use fertilizer occasionally, or as warranted, on some "trouble areas" only;

The most frequent fertilizer ratios used are: 1-1-1, 1-2-1 and 1-3-1; a large variety of grades is being used from 3-12-12, 4-10-4, 5-10-5, 10-10-10, 12-12-12, 8-16-16, 10-6-4, to 13-13-13, 20-35-0, 12-12-0, 10-20-10, 16-20-0, 16-20-8.

Some states (14) reported a preference for granulated inorganic nitrogen grades over the organic nitrogen-

(Continued on page 20)

## Shell Chemical Corp. Proposes Tolerances For Aldrin Residues

WASHINGTON — Shell Chemical Corp., New York, has filed a petition with the Food & Drug Administration proposing tolerances for residues of aldrin in or on a number of raw agricultural commodities.

The petition asks for tolerances of .5 part per million in the fat of meat from beef cattle, hogs, sheep and poultry; .25 part per million in or on range grass and .05 part per million in the milk of cows.

The firm also is proposing a tolerance of .1 part per million in eggs of chickens and .1 part per million in or on the grain of field corn, popcorn, sweet corn, milo and sorghum; legume forage (including clovers, alfalfa, cowpea hay, lespedeza, lupines, peanut hay, peanut vine hay, soybean hay and vetch); corn forage and sorghum forage; and pasture grasses (including small grain forage).

## Seven Million Acres in Conservation Reserve

WASHINGTON — With complete reports not yet in, U.S. Department of Agriculture officials have estimated that about 7 million acres were contracted for the Conservation Reserve of the Soil Bank under the program which closed for this year on April 15.

Farmers who have placed land in the program are eligible for a total of about \$112,050,000 in Conservation Reserve payments this year. Of this total about \$50,450,000 would be practice payments for applying conservation measures to the land and \$61,600,000 would be the first of the annual payments to be made each year the Conservation Reserve contracts are in force and complied with.

## Tolerance Set

WASHINGTON—The Food & Drug Administration has established a tolerance of 50 parts per million for residues of ethylene oxide in or on copra and whole spices. The tolerance became effective May 1.

## Canada Firm Plans \$5 Million Plant

TORONTO—Electric Reduction Company of Canada has announced that it will erect a \$5 million chemical plant at Port Maitland, Ont., on Lake Erie.

Facilities will be installed to produce phosphoric acid by both electrochemical and wet-process methods. Company officials said that the plant will have ample capacity to supply agriculture and industry in the area.

The phosphate ore now used by the company is imported from Florida. Phosphorus for the electrothermal process will come from the firm's plant at Varennes, Que.

Construction of the new plant is to begin this spring, and production is scheduled for early 1958. Previously, the company had announced that it would build the plant in the Hamilton Bay area.

## TECHNOLOGICAL EXPLOSION ON FARM

## Farm Support Programs Not Working, Ezra Benson Says

WASHINGTON—The nation's farm support programs are not working, Ezra Taft Benson, secretary of agriculture, has declared in a letter to Sen. Allen J. Ellender (D., La.) chairman of the Senate committee on agriculture and forestry.

"Congress has provided forward looking and needed action to reduce surplus stocks. Now the need is to see that granaries and warehouses presently being emptied are not filled with price-depressing surpluses," the letter said.

Mr. Benson makes three points in his letter:

1. Controls are not effective in reducing over-all agricultural production, despite the severe restrictions they impose on farmers'

freedom to produce and market.

2. Agricultural products are likely to continue to be abundant. Under such conditions they cannot be successfully priced as if they were scarce.

3. The present legal formulas governing acreage allotments and price supports are proving obsolete. "A technological explosion is occurring on American farms," the letter continues. "Production per farm worker has doubled in the last 15 years. This creates a new dimension in farm policy and makes it virtually impossible to curtail agricultural output with the type of controls acceptable in our society."

"Farmers are being subjected to

(Continued on page 17)

## New Light on Moisture Tension Points To Better Water, Fertilizer Management

**EDITOR'S NOTE:** The following article is reprinted from the May issue of *Agricultural Research*, published by the Agricultural Research Service of the U.S. Department of Agriculture.

★ ★ ★

Soil moisture tension—the tenacity with which water clings to soil particles—has been widely accepted as the controlling factor in a crop's ability to get water. But studies now show that tension also profoundly influences nutrient uptake and that water content of a soil is an important additional factor in availability of both water and nutrients.

A thorough understanding of these principles developed through U.S. Department of Agriculture state research should open the way to much

better integration of water and fertilizer management than now practiced in the humid East as well as in the irrigation areas.

D. B. Peters, Agricultural Research Service soil scientist, working cooperatively with the Illinois Agricultural Experiment Station, compared root growths in soils at various moisture contents and various moisture tensions.

When there was no difference in moisture content, tension regulated the amount of root growth. But among soils at the same tension, soils with the greater moisture gave the greater root growth. In this case, soils of higher clay content held greater amounts of water.

When water is extracted by the root, more water must flow to the root from the soil mass before fur-

ther extraction can occur. The movement of replacement water largely determines how fast plants can take up water and grow. The soil's capacity to hold water and to transport it determines the distance over which roots may obtain water.

The rate at which a new supply moves in is determined by both soil moisture tension and by the ability of soil to conduct water. The ability of soil to conduct water is influenced by soil water content. Therefore, both the tension and the content are important.

Mr. Peters also made preliminary studies of the effects of soil moisture tension and soil moisture content on nutrient absorption by plants. He added various amounts of radioactive rubidium to soils of different textures and, with the aid of a Geiger counter, measured the amount of rubidium taken into corn roots.

Contrary to expectation, the total volume of nutrients in the soil did

not determine how much nutrients would be taken up. Instead, the root got more nutrients as the nutrient solution in the soil became more concentrated.

Stated another way, at any one moisture tension, the lower the moisture content (due, for example, to greater soil coarseness), the richer the nutrient solution and the greater the nutrient uptake. That is consistent with the method of nutrient absorption through exchange of ions between a root and the soil.

But when the nutrient solution was enriched by adding more nutrients (rather than by increasing tension through reducing soil moisture) a new factor entered the picture. Increasing the amount of nutrients per unit of soil brought about a gain in the nutrient uptake—a disproportionately large gain compared with the amount of nutrient applied.

This showed that the plant's nutrition was influenced by some factor in addition to the nutrient applications—probably a transport phenomenon.

After the initial increase in rubidium uptake as wet soil (soil in the low-tension range) dried out, there was a gradual decrease in rubidium uptake while tension further increased.

Mr. Peters thinks this could be caused by (1) reduced diffusion of the nutrient within the moisture next to the root, where extraction occurs; and (2) by a lag in mass flow of nutrient-laden moisture through the soil to the root as water is locally depleted—especially the latter.

The study further showed that in a drying soil, as moisture tension rises, nutrient starvation sets in before water starvation does. Apparently, nutrient transfer is more drastically affected than water flow.

### Carolinas-Virginia Group Completes Program Plans

VIRGINIA BEACH, VA.—Program plans for the three-day meeting of the Carolinas-Virginia Pesticide Formulators Assn. have been announced by W. R. Peele, Raleigh, N.C., secretary of the group. The meeting will be held at the Cavalier Hotel here May 13-15.

J. Myron Maxwell, Raleigh, president of CVPFA will welcome the delegates in a morning session May 14, and John E. Koonce, partner in the CPA firm of Watts, Koonce and Wooten, Raleigh, will speak on "Accounting, the Language of Business." A round-table discussion covering problems of the industry will complete the morning session.

Col. Earle D. Bottom, president, Universal Tractor and Equipment Co., Richmond, Va., will speak on "Techniques of Selling" at a luncheon program.

The annual banquet is scheduled for the evening of May 14, with Maury Hubbard, executive secretary of the Virginia Farm Bureau Federation, as speaker.

A morning session on May 15 will round out the business portion of the program. Committee reports will be heard and a meeting of association members will convene.

Sightseeing tours and other activities are being planned for wives of conventioners, Mr. Peele says, while golf and other events are on the agenda for men.

A movie, "Man Sows" will be shown Monday evening, May 13, at the hotel. The film will be presented through the courtesy of Chemagro Corp.

### WHITE PINE BLISTER

GENEVA, N.Y.—The first record of the presence of the white pine blister rust fungus in the U.S. was made in 1906 by F. C. Stewart, botanist at the New York State Agricultural Experiment Station at Geneva, now celebrating its 75th anniversary.

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## INSECT AND PLANT DISEASE NOTES

### Alfalfa and Clover Hit By Spittlebugs

LAFAYETTE, IND.—The common meadow spittlebug is reaching an all-time high in Indiana on alfalfa and clover, according to Dr. John V. Osmun, head of Purdue University's entomology department. He said the insect sucks the juices from the plants causing stunting and abnormal growth.

Counts on the insect are now running five or six per stem in southern Indiana and two per alfalfa stem in northern Indiana. If this condition is allowed to continue, loss to pasture and hay crops will likely run as high as 50%.

Fortunately, this condition can be stopped, Dr. Osmun declares, if prompt chemical treatment is applied now. If spittlebugs are averag-

ing one or more per stem, treatment is warranted. Right now is the best time to treat with insecticides since the young spittlebugs are most susceptible to the chemical.

### Alfalfa Aphids Fail to Survive Cold Winter

FORT COLLINS, COLO.—Colorado's winter weather apparently has been too much for the spotted alfalfa aphid. After surveying areas which suffered heavy infestations last year, entomologists with the Colorado insect detection committee have reported no evidence of overwintering populations. Surveys were made in the eastern, southeastern, western and southwestern counties.

Dr. L. B. Daniels, chief entomologist for the Colorado agricultural experiment station and committee chairman, is cautious on predictions, however. Growers must continue

usual management practices to protect their crops from the spotted alfalfa aphid, he said.

In the first insect report of the season, it was noted the army cutworm has been found in wheat in Logan and Washington counties and in alfalfa in Weld and Prowers counties. The alfalfa has suffered some damage, with observers finding one to four per crown.

In Larimer county the brown wheat mite is causing damage in wheat fields. It has been spotted at the rate of 100 to 200 mites per plant.

In sugar beet-producing areas, larvae of the sugar beet maggot were found from 2 to 6 inches in the soil at the rate of one to three larvae per square foot. Pupation is usual by May 1, and the adults emerge about a week later.

In southeastern Weld county the clover leaf weevil has been observed at the rate of one to four adults per crown.

In Mesa county a few pea aphids

have appeared in alfalfa fields. Larvae of the alfalfa weevil are also being taken in that area. Wheat fields east of Eaton in Weld county have given up numbers of the wheat stem maggot at the rate of 10 to 12 per wheat crown.

### Forage Crops Damaged By Beetles, Weevils

CLEMSON, S.C.—Damage to Coastal Bermuda grass and other forage crops by flea beetles and to alfalfa by alfalfa weevils is reported by members of the Clemson entomology and plant disease extension work. Unusually heavy damage to Coastal Bermuda and other forage crops by flea beetles has been reported by H. A. Woodle, leader, Clemson agronomy extension work, and B. Bailey, Richland county agent. Such heavy damage is unprecedented in South Carolina, but so far it has been localized. Millet is also being damaged and in some cases killed outright.

No recommendations for the control of flea beetles on Bermuda grass or millet grown for forage are available. Insecticides effectively control the flea beetle, but pesticides that might contaminate milk and meat should not be used on forage crops.

Detection of the alfalfa weevil in South Carolina by research personnel means that farmers in the state must learn to live with the alfalfa weevil. W. C. Nettles, leader, Clemson extension entomology and plant disease work, recently visited alfalfa demonstrators in Newberry, York, and Fairfield counties.

He reports the following: (1) Heaviest damage by the alfalfa weevil was noted in Fairfield county; moderate damage was noted in localized fields in York county, and extremely light to no damage in fields in Newberry county; (2) county agents are alert to the situation and are using information found in USDA Leaflet No. 368, "The Alfalfa Weevil—How To Control It," to control outbreaks; (3) surveys, demonstrations and meetings on control measures will be conducted as needed.

Thrips, or harvest bugs, are expected to move soon into cotton fields throughout the Piedmont counties. Experiences and observations in previous years indicate that fields of cotton may be severely damaged by heavy populations of these insects. They begin attacking cotton about the time small grains begin to ripen and continue to feed on the tender terminal growth for several weeks.

The first indication of thrips' damage is a silverying on the undersides of the cotyledons, or seed leaves, of true leaves as they first appear. This damage causes the leaves to pucker and results in what is commonly called "possum-eared" cotton. If this damage is not prevented, cotton seedlings will be stunted, squaring, blooming, and fruiting will be delayed.

### Cutworms and Other Pests Reported in Illinois

URBANA, ILL.—Cutworms are still found in red clover fields and are feeding heavily. Instead of grazing the leaves, they shear the leaves. Control is probably not necessary if the worms are nearing maturity and will stop feeding soon.

Spittlebug hatch is well under way in northern Illinois and should be complete within the week. If there is an average of one or more nymphs per stem, treatment will usually be profitable.

Pea aphids are now present in large numbers. Observe alfalfa fields closely for the next few weeks. Clover root borer adults were more abundant than in previous years. Although previously present in Illinois, it has not been a serious pest to clover in that state.

Armyworm moth flight continues at a moderate rate. For the next several weeks, observe luxur-

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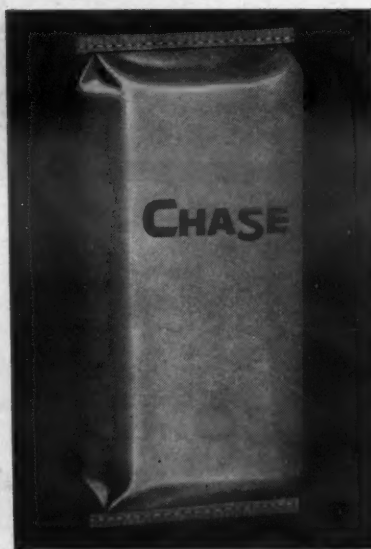
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alfalfa fields. Larvae of alfalfa weevils are also being reported in wheat fields. In some fields, the wheat stem may be damaged to the extent of 10 to 12 per cent.

## Damaged Weevils

Damage to alfalfa and other forage crops by alfalfa weevils is reported in the Clemson extension service. Heavy damage to alfalfa and other forage crops has been reported in the Clemson extension service, and Bob Petty, county agent, has reported that the damage is unprecedented in the history of the county. So far it has been reported that the alfalfa has been killed outright. The damage to the alfalfa is so severe that the alfalfa is being used for hay. The alfalfa is being used for hay and the alfalfa is being used for hay.

Alfalfa weevil in research personnel in the state with the alfalfa weevil, leader, Clemson extension service, and plant pathologist, recently visited alfalfa fields in Newberry and counties.

Following: (1) the alfalfa weevil in Fairfield county, was noted in local alfalfa fields; (2) county agent, the situation and damage found in USDA the Alfalfa Weevil, to control outbreaks, demonstrations, control measures are needed.

At bugs, are expected into cotton fields in the counties. Observations in past fields of cotton damaged by high insects. They began about the time to ripen and continue terminal weeks.

On of thrips' damage on the underside of seed leaves, and they first appear on the leaves to in what is called "cup-eared" cotton. Not prevented, the will be stunted and, and fruiting will

## Other Pests in Illinois

Cutworms can be found in alfalfa fields and clover fields. Instead of ragwort, they shear the leaves. If not necessary, and maturity and on.

is well under way and should be in the week. If there is one or more nymphs, it will usually be

ow present in small alfalfa fields close to a few weeks. Clover were more abundant in years. Although in Illinois, it has pest to clover pro-

th flight continues late. For the next observe luxuriant

grasses and grains for signs of armyworm feeding.

Between 60 and 85% of the corn plants observed in corn stalks are still alive. This is normal survival. Effect of parasitism by the *Lydella* cannot be predicted at this time but may be heavier than normal.—L. B. Petty.

## New Race of Rust Noted in Texas

COLLEGE STATION, TEXAS.—Race 6 of oat stem rust, which is apparently new in Texas, has been reported by the Federal Rust Laboratory. Specimens of oats from which the determination was made were collected in South Texas near Beeville by research workers of the Texas Experiment Station.

Dr. Harlan E. Smith, extension plant pathologist, says that Race 6 had previously been reported in the northeast United States and south-east Canada. Researchers in those areas have begun work toward developing resistant varieties. Dr. Smith points out that this new race of rust will further complicate the difficulties of developing rust resistant varieties since each new variety must now be tested for resistance against Race 6.

Other new races of rust that have been reported this year are 7A of stem rust and 213 and 216 of oat leaf rust.

## Numerous Varieties of Pests Found in Missouri

COLUMBIA, MO.—Pea aphids have been on a rapid buildup during the week ending May 4 and are now present in sufficient numbers to be a threat in the southeastern counties, and in the north and north central sections of the state.

Although some fields are beginning to show damage, spraying will not be necessary unless damage becomes noticeably heavier. Numbers of aphids are being held somewhat in check by insect parasites and predators, and by a fungus disease, all of which have greatly reduced the aphids in some fields. Continue to watch alfalfa fields carefully but as late in the season as it is, there is little possibility of large-scale spraying becoming necessary.

For this first time this spring, we have been able to find spotted aphids in alfalfa recently. In all probability these have come in from the southwestern states.

Of course no damage is being done yet by these insects, but there is always the possibility of trouble during the dry portions of the summer and early fall.

The grasshopper hatch is underway. We are finding the young of both the redlegged and the migratory hoppers, and if warm weather continues, you can expect the hatch to be heavy for the next two or three weeks.

Whether or not we have much hopper damage this year will depend primarily upon the weather. If we continue to have plenty of rainfall, grass and wasteland vegetation will stay in good condition, and the hoppers will largely continue to feed there rather than concentrating in crops. But during dry weather, such vegetation dries up, and the hoppers begin to move into crops. Damage is especially severe when we are short of moisture during May and June, and the hoppers move into crops by late June or early July.

But since there's no way of knowing whether or not we'll get plenty of rainfall this summer, the safest bet is to use early season control on the hoppers. Be on the watch for hatching beds—spots in pastures, fence rows, and such grassy areas

where there are thousands of little hoppers about the size of houseflies. When you find such a spot, that's the time and place to start controlling grasshoppers.

In those counties where vetch is grown, it will pay off tremendously to spray for the vetch bruchid, or vetch weevil. These insects lay eggs on the forming seeds soon after the pods begin to form. The weevil grub hollows out the forming seed, and emerges about the time the vetch is combined. The only way to control these insects is to spray immediately after blooming, about the time the pods begin to protrude from the drying blooms.

## Alfalfa Weevils at Peak, Other Insects Reported

BLACKSBURG, VA.—Alfalfa weevil populations are at a peak in infested counties in Virginia, and controls have been applied—or soon will be—in most areas, according to the

weekly survey of insect activity in the state made by entomologists at Virginia Polytechnic Institute.

The entomologists say the insecticide recommended for pea aphids or spittlebugs can be mixed with that recommended for the alfalfa weevil and applied simultaneously. However, alfalfa can stand fairly large populations of pea aphids before controls are justified.

Reports of general infestations of the pea aphid have not been received, although that insect continues to threaten some fields of alfalfa and clover in all parts of the state.

Meadow spittlebug populations are heavy in some southwestern counties. Farmers who apply combinations of two or more insecticides are advised to wait about two weeks before harvesting alfalfa or clover.

Truck gardeners are warned that the spider mite could easily develop into a major problem on strawberries this season, especially if weather conditions become more fa-

vorable to the mite. They are not, however, causing extensive damage at this time. (May 8.)

Home owners around the Richmond area are having trouble with spotted cutworms damaging azaleas and tulips. The entomologists recommend treating the ground at the crowns or the beds with granulated dieldrin to control this pest.

## Alfalfa Weevil at Peak in Maryland

COLLEGE PARK, MD.—The alfalfa weevil is about at its peak in Central Maryland. Larvae are very abundant and the hot dry spells have hastened development. Larvae have already begun to make cocoons in Montgomery County and pupae were found May 2. There are few pea aphids and natural enemies are taking over. Spittlebugs are scarce in most places. Spraying of both alfalfa and

(Continued on page 20)

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## Fertilizer Solutions Group Plans Meeting In Cincinnati Nov. 17-19

CHICAGO—The 1957 convention of the National Fertilizer Solutions Assn. will be held at the Netherland-Hilton Hotel in Cincinnati, Nov. 17-19, it has been announced by Muriel F. Collie, executive secretary.

A new feature of the convention will be the establishment of supplier conference rooms, in place of the usual trade show, where the suppliers can set up display boards, show samples, distribute literature, and visit with their customers. Supplier conference rooms will be open from 6 to 10 p.m. on Nov. 17 and for specified hours, not conflicting with convention sessions, on Nov. 18 and 19.

The Standards Committee of the association will conduct a general session on standards the morning of Nov. 17. Members of the committee are Roy F. Broyhill, the Broyhill Co., Dakota City, Neb., chairman; W.

Harold Schelm, Schelm Bros., Inc., Peoria, Ill., and Donald R. Weber, Spraying Systems Co., Bellwood, Ill.

At this session, it is expected that a program of standardization will be developed for such items as tank fittings, size designations for all nozzles, etc.

E. E. Crouse, U.S. Liquid Fertilizer Corp., Indianapolis, association president, has called a meeting of the board of directors the evening of Nov. 17. Following the election of new members of the board on Nov. 18 the directors will meet again that evening for the election of officers and to plan the program for the ensuing year.

General sessions will be held the morning of Nov. 18 and the morning and afternoon of Nov. 19.

The convention agenda will include the following topics: selling and customer relations; material supply outlook, with producers covering nitrogen, phosphoric acid and potash; local consumer meetings, an audience participation discussion; essentials to

success, from standpoints of sales ethics, agronomy and economics; and additives to fertilizer solutions, with producers taking up topics of pesticides in fertilizers, trace elements and new hormones.

The annual banquet will be held the evening of Nov. 19.

Ernest M. Harper, Nitrogen Division, Allied Chemical & Dye Corp., Indianapolis, is chairman of the 1957 Convention Planning Committee and is in charge of all arrangements. Serving with him on the committee are William G. Calvert, Lafayette Farm Supply, Inc., Lexington, Mo.; Ralph Helmstatter, H&R Agricultural Service, Norwalk, Ohio; John Ackley, John Deere Planter Works, Moline, Ill.; O. L. Ohnstad, Ohio Fertilizer, Inc., So. Solon, Ohio, and Mr. Crouse.

Headquarters office of the association is located at 2217 Tribune Tower, Chicago 11.

The association has announced the adoption of an insignia of membership, the design for which was sub-

mitted to the board of directors by W. Harold Schelm, Schelm Bros., Inc., Peoria, Ill. Members of the association are being urged to use it in their literature, advertising and on all letterheads and other printed material. Electros of the insignia are available to all members of the association, and it is anticipated that insignia decalcomanias will become a part of this program soon.



## Fabricated Metals To Build Four Liquid Plants in Mexico

SAN LEANDRO, CAL.—Four liquid fertilizer plants will be built in Mexico by Fabricated Metals, Inc., San Leandro, the firm has announced. The plants will make aqua ammonia.

The first plant will be erected in Northwestern Mexico to serve certain irrigated areas in Lower California, Sonora and Sinaloa. Sale of the plants was made through Fabricated Metals Western Export, Inc., to Petroquímica de Mexico, S.A.

## M. W. Butler Named Manager of Ohio Plant

SOUTH POINT, OHIO—Marshall W. Butler has been appointed manager of the South Point, Ohio, plant of Nitrogen Division, Allied Chemical & Dye Corp.

Since 1954, Mr. Butler has been assistant to Nitrogen Division's director of production, and before that was assistant to the plant manager at the Division's plant in Hopewell, Va. In his new position, Mr. Butler succeeds C. W. Bahrt, Jr., who has been made assistant to the director of production at the Division's main office in New York. Mr. Bahrt had been plant manager at South Point since 1953 and before that was assistant general superintendent at Hopewell.

## Spring Grain Seeding Progressing in Oregon

PORTLAND, ORE.—Western Oregon field crops, fruits and berries made satisfactory progress during the past week and there was increased field work action in most Willamette Valley districts with the arrival of more favorable weather conditions according to the regular crop and weather summary issued by the Oregon U.S. Department of Agriculture Crop & Livestock Reporting Service.

About three fourths of the spring wheat and two thirds the spring oat and nearly one half of the spring barley has been seeded. Early planted spring grain fields have emerged and are showing good stands and color on the better drained lands.

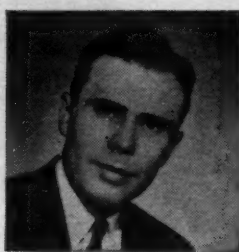
Strawberries averaged about 50% of the full bloom state, ranging from just starting to bloom. Vetch, pea and clover stands are generally good although some fields show thin patches from winter killing and excellent standing water. Present crop prospects are good throughout Eastern Oregon areas, although grain crop made slow growth during last week's cool, windy weather.

Ranges and pastures supplied livestock with ample forage at the low elevations. Spring grains are nearly all seeded and early seedlings have emerged in the Columbia Basin counties and in Malheur County. Columbia Basin farmers were busy completing spring crop planting, plowing, weeding, and spraying for weed control.

MASSACHUSETTS CIRCULAR AMHERST, MASS.—The University of Massachusetts has issued Special Circular 178, "General Purpose Home Fruit Spray Schedule."



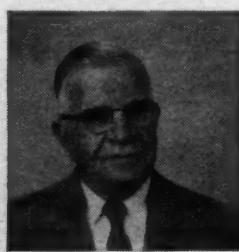
D. F. WICKS  
New York, N.Y.



W. E. NOBLE  
New York, N.Y.



H. L. HOUSER  
Buffalo, N.Y.



T. C. SPLANE  
New York, N.Y.



R. L. WALTERS  
New York, N.Y.



S. G. SHETTER  
Middletown, Ohio



J. J. GREENE  
Louisville, Ky.



M. F. KEANE  
Cleveland, Ohio



A. P. WOLFF  
Detroit, Mich.



R. W. DRURY  
Kansas City, Mo.

Get acquainted with a Packaging Problem-Solver...

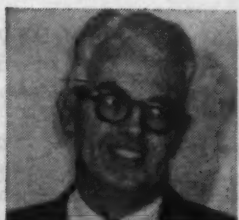
**Raymond**  
THE  
MULTIWALL MAN

...and the Multiwall Men at your service

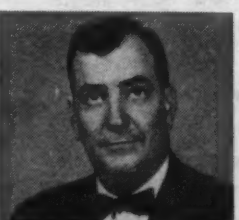
And... as our little man suggests, the Raymond representatives pictured here are practical packaging problem-solvers. Years of experience in the multiwall field backed by the Kraft paper resources of Albemarle and the extensive manufacturing facilities of Raymond, gives you the answer to your problems... rapidly and effectively. Raymond men are bag men. They know their product and how to make it work for you. They see to it that the last bag of your order is as crisp and salesworthy as the first. Phone the Raymond Multiwall man nearest you... let him show you how you can solve your packaging problem with a Raymond Multiwall!

## RAYMOND BAG CORPORATION

Division of Albemarle Paper Mfg. Co.  
MIDDLETOWN, OHIO • RICHMOND, VIRGINIA



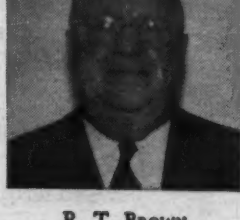
P. M. SEAMAN  
Philadelphia, Pa.



C. L. STEMEN  
Charlotte, N.C.



H. L. GULDEN  
Minneapolis, Minn.



R. T. BROWN  
St. Louis, Mo.



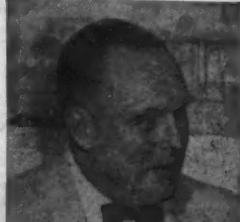
FRANK FINEGAN  
Kansas City, Mo.



D. D. YOUNG  
Des Moines, Iowa



C. A. DILLON  
Houston, Texas



T. B. ATHEY  
Baltimore, Md.



Frank G. Hough

### Frank G. Hough, Founder of Hough Co., Announces Retirement

LIBERTYVILLE, ILL. — Frank G. Hough, founder and chairman of the board of the company which bears his name, has announced his retirement.

A pioneer in the bulk materials handling and tractor-shovel fields, Mr. Hough designed and sold his first hydraulic shovel attachment while vice president and general manager of the Blair Manufacturing Co., Chicago, in 1922.

In 1931 he acquired the Blair Manufacturing Co. and in 1933 The Frank G. Hough Co. was incorporated. For several years the newly formed company originated, designed and engineered its own products, maintained its own selling staff, but subcontracted the manufacturing operations to other companies.

The Frank G. Hough Co. moved from Chicago to its present location in Libertyville, Ill. in 1939 at which time manufacturing and service facilities were established. That year also saw the introduction of the first "Payloader," to operate inside box cars and to unload bulk materials.

In 1948 Hough introduced the first four-wheel-drive tractor-shovel, the model HM "Payloader."

Between 1939 and the present time, the plant has expanded from the original 14,000 sq. ft. to a point where the manufacturing operations now encompass almost 400,000 sq. ft. It is the largest plant in the world devoted exclusively to the manufacture of rubber-tired tractor-shovel machines.

The stock of The Frank G. Hough Co. was purchased in 1952 by International Harvester Co. and it is now operated as a wholly-owned subsidiary.

In announcing his retirement Mr. Hough said his plans for the immediate future are not as yet definite. He indicated that he expected to remain in the business of manufacturing, however.

### South Carolina Tonnage Drops in Final 1956

COLUMBIA, S.C. — South Carolina farmers used less fertilizer and fertilizer materials in the fiscal year ending last June 30 than in any of the last six years, the South Carolina Department of Agriculture has reported in its 1956 yearbook, now being distributed.

Tonnage reported in the last fiscal year was 242,696 for fertilizer materials of various kinds; tonnage of mixed fertilizer was 620,921.

These figures represent a decline in fertilizer materials of 40,966 tons below the previous year, and for mixed fertilizer a decline of 24,132 tons.

### Delhi-Taylor Making Test Drillings at Utah Potash Site

MOAB, UTAH — Further information about potash activities here by the Delhi-Taylor Oil Corp., Dallas, Texas, has been released by that firm. Delhi-Taylor has been drilling preliminary shaft pilot test holes, preparatory to planned construction of shafts and a potash processing plant. (See page 1 of the April 29 issue of Croplife.)

Site of the potash activity is the Seven-Mile Canyon area north of Moab. The project eventually is expected to employ up to 500 persons.

According to Robert Norman, resident geologist for the oil company, it will take up to two years to sink the shaft.

"We have had a successful year in the development of the southeastern Utah potash project, and all the phases undertaken have yielded re-

sults which have only added to the prospect of a long-term profitable enterprise," Dr. Elton D. Soltes, project engineer for the Delhi-Taylor firm told stockholders at their April meeting in Dallas.

The potash must be reached through the drilling of shafts costing up to \$5,000,000 each, according to Mr. Norman. In addition, a multi-million dollar plant must be built.

One of the shafts would be used for transporting men and supplies to the ore level. The other shaft would be used to hoist ore to the surface where it could be crushed and processed ready for shipping.

### BIG STRAWBERRY CROP

FRANKFORT, KY. — The strawberry crop of Kentucky will be worth approximately \$5 million, according to an estimate made by C. Harold Bray, state market director. A greater number of acres is planted to the crop, and yields per acre are expected to be up as much as 25%.

### California Firm Names New Technical Director

EDISON, CAL. — James Bonaventura, president and general manager of A F C, Inc. at Edison, Cal., has announced the appointment of Dr. Edwin N. Roth as technical director of A F C, and his election as a vice president of that company.

In his new position, Dr. Roth will be in charge of technical development and the manufacture of granular and liquid fertilizers and insecticides. He will also assist A F C field representatives in their service to farmers.

### DELAWARE LAND VALUES

NEWARK, DEL. — Farm land values in Delaware rose 9% during the past year, as compared with a 4% increase for the U.S., according to Dr. R. O. Bausman, chairman of the department of agricultural economics at the University of Delaware.

now! a new way to build dealer enthusiasm and sales!

# the CHLORDANE \$10,000<sup>00</sup>

## "Show and Sell" Contest

will make this the biggest selling season ever!

**MORE OF YOUR PRODUCTS WILL BE DISPLAYED — AND SOLD!** The Chlordane "Show and Sell" Contest is for dealers, but the real winners will be you and your salesmen! Every entry means a special display of your products! It's bound to stimulate sales, because dealers throughout the country will be featuring Chlordane during May and June, two of your best selling months!

**YOUR SALESMEN SHARE IN THE PRIZES!** For every dealer prize, Velsicol will award special cash prizes to the formulator or distributor salesmen responsible for assisting in setting up the winning displays. There's a total of 35 cash prizes for salesmen, totalling over \$2,000.00!

**1ST PRIZE...A FABULOUS TRIP TO PARIS**

Grand prize, for the best Chlordane display in the country is a fabulous all-expense paid luxury vacation in Paris for two! In addition there will be four national cash prizes totalling \$1,500.00, and 30 big regional cash prizes totalling \$6,500.00!

Velsicol will also pay your salesmen a special bonus of \$2.00 for every display they help set-up... whether it is a winner or not. Your men can earn extra money and make a minimum sale of five cases of your insecticide at the same time!

### SPECIAL BONUS PLAN FOR SALESMEN!

#### HERE'S HOW IT WORKS:

- 1 The dealer must buy a minimum of five cases of your Chlordane products, and use them in the display. For helping the dealer set-up a display that meets the contest requirements, your salesmen will receive \$2.00 per display.
- 2 Displays will be judged for originality, attention value, and merchandising effectiveness.
- 3 For every dealer prize, a special cash prize will be awarded to the salesman who helped make the entry a winner!

MAIL THIS COUPON TODAY FOR COMPLETE INFORMATION!

## CHLORDANE

... the proven lawn and garden  
insecticide preferred by millions!

all the facts... at no obligation!

**VELSICOL CHEMICAL CORPORATION**  
330 East Grand Avenue, Chicago 11, Illinois

Please rush full details about the big Chlordane "Show and Sell" Contest.

Name

Company

Address

City  Zone  State

Watch for the biggest consumer advertising campaign in Chlordane history!

## Investment in Plant Food Pays Off, Newly Published Book Says

AMES, IOWA — American farmers are finding out that increasing their use of fertilizer is one of the best ways to invest their money. Studies indicate that dollars invested in fertilizers produce more revenue for the farmer than the same amount of money spent for additional livestock, a new tractor, or improvements. These facts are pointed up in a new book published by the Iowa State College Press entitled, "Economic and Technical Analysis of Fertilizer Innovations and Resource Use."

This book was prepared as a guide to agricultural workers doing research on the production, distribution and use of fertilizers. It contains the authoritative opinions and latest research findings of 29 specialists in the field. The authors present new tech-

niques for the analysis of research problems, and point out additional problems whose solutions will provide practical answers for many farming problems.

The discussion of fertilizer innovations appears in five parts. Part I discusses the physical and economic aspects of water solubility in fertilizers. Parts II and III present agronomic and chemical development problems which have a direct bearing upon the economic evaluation of fertilizers. Farm planning and research and its practical application is discussed in Part IV. The final section deals with agricultural policy implications in technological change.

"Fertilizer Innovations and Resource Use" is based upon papers presented at the 1956 seminar for participants in the TVA agricultural economics research program. The book was compiled under the editorial direction of E. L. Baum of the TVA, Earl O. Heady and John Pesek of Iowa State College, and Clifford G.

Hildreth of Michigan State University. These seminars have been established by the TVA to encourage the production, distribution, and use of high analysis, low cost fertilizers. Copies of this book can be obtained from the Iowa State College Press, Ames, Iowa, at \$4.50 each.

## Great Plains Ammonia Meeting Is Planned

MANHATTAN, KANSAS — The Great Plains Anhydrous Ammonia meeting will be held July 11-12 at Kansas State College here, according to an announcement made by Jack F. Criswell, executive vice president of the Agricultural Ammonia Institute, sponsors, Memphis, Tenn.

The Great Plains group includes nine states: Oklahoma, Missouri, Kansas, Colorado, Iowa, Nebraska, Minnesota, North Dakota and South Dakota.



H. Stanley Lawton

## H. Stanley Lawton New Vice President Of Michigan Chemical

SAINT LOUIS, MICH. — Michigan Chemical Corp. has announced the election of H. Stanley Lawton as vice president in charge of sales and market development of the company, effective June 1. His headquarters will be at Saint Louis, Mich., headquarters of the company.

Mr. Lawton received his degree of bachelor of science in chemical engineering from the University of Delaware in 1940. He then joined Hercules Powder Co. where he served as technical salesman and product promotion specialist and as a district sales manager.

Mr. Lawton later enrolled at Harvard Business School and graduated with honors in marketing, manufacturing and finance. He then became employed by Dewey & Almy Chemical Co. and advanced to the position of divisional general sales manager, which he left to join Michigan Chemical Corp.

## Walter Crady, Owner Of Fertilizer Firm, Dies

LOUISVILLE — Walter Crady, organizer and president of the North American Fertilizer Co. here since it was formed in 1925, died May 4 at St. Anthony's Hospital, Louisville. The company had grown into a sizeable producer and distributor of commercial fertilizers, with its field of sales largely in Kentucky, Indiana and Tennessee.

Mr. Crady had been in the hospital since April 19, as a result of injuries suffered in a fall at his home.

A native of LaRue County, he was one time taught school in Nelson County, prior to World War I, and was assistant superintendent of public instruction for Kentucky. Prior to 1919 he was part owner of the Hot Springsville, Ky., Herald-News, a weekly newspaper.

He reorganized the Farmers & Depositors Bank, of St. Matthews, Ky. in 1933, after the banking depression and was president of the bank until 1951, when it was sold to the Citizens Fidelity Bank & Trust Co., of Louisville.

## Vapam Approved For Use on All Crops

NEW YORK — Stauffer Chemical Co. said May 6 that its soil fumigant Vapam, has been approved for use on all crops. Previously, the compound had been sold only for application to seed beds, tobacco, ornamentals and turfs.

Dan J. Keating, general manager of Stauffer's Agricultural Chemical Division, said that, in light of the U.S. Department of Agriculture food crop approval, the company is expanding its farm marketing program.



**POTASH RAISES FARM INCOME.** The successful American oat farmer. He's up to date on all the latest farming methods. He knows, for example, that his soil only gives its best when regularly replenished with potash-enriched fertilizers. He does this every year, and his harvest is the envy of the entire county. This fellow is no smarter than his neighbors. Just knows his oats.

USP's Higrade muriate of potash is free-flowing and non-caking and has the highest  $K_2O$  content—62/63%  $K_2O$ . USP's Granular muriate of potash—60%  $K_2O$ —is also available.

## UNITED STATES POTASH COMPANY

DIVISION OF UNITED STATES BORAX & CHEMICAL CORPORATION  
30 Rockefeller Plaza, New York 20, New York  
Southern Sales Office: Rhodes-Haverty Building, Atlanta, Georgia



REG. U.S. PAT. OFF.

## For Successful Selling

### Keep Your Foot on the Fence

By Hal Lowther

Sales Management Consultant

In the field of sales management consulting, the management's approach to the problem of selling is often amazing.

An original interview always follows a fairly definite pattern, which goes something like this: "Mr. Lowther, our sales have fallen off sharply during the past months and what we need is a good sales manual and some new sales promotion and advertising to get back into the market. Can you help us do this?"

A complete self diagnosis is made and usually further questions lead to the same predetermined conclusions. It always tends to make one feel like the doctor who was called in to help a rather testy old aristocrat who was feeling badly. The old man promptly told the doctor what was wrong with him and then in answer to the searching and prying questions of the doctor, answered with disgusted and very brief grunts. The old man asked where he was going and he gave this reply, "I'll be back shortly with a professional friend of mine—a veterinarian. He is the only fellow I know who can make a diagnosis without asking questions."

Like the doctor I fully agree that the self diagnosed need for pills and remedies for the immediate hurting is necessary and imminent. But also like the doctor, it is known that the cure to the hurting does not lie in the relief of immediate pain alone, but rather in diagnosing and correcting the source of that pain.

I have, as the result of many interviews of this type, hit upon one short provocative question that helps the process of analytical diagnosis and minimizes rationalization. The question asked is simply: "Have you kept your foot on the fence?" The meaning of this question is simple. Has the salesman forgotten the basic principle of successful salesmanship. Repeat—repeat and repeat—the sales story in the good market as well as the bad market. Selling is hard work and a continuing process. Elmer Lederman, the dean of all American salesmen, made the apt statement that: "Most salesmen would be glad to succeed by hard work if—it did not take so much effort".

That is the diagnosis 9 times out of 10 for a declining sales volume.

Whatever the cause is or has been, the panacea does not lie alone with a new sales tool but rather with "creative salesmanship". Yes, creative salesmanship even when the salesman has nothing to deliver—even if he is selling only the idea, the benefits—because some day down the line he is going to have a competitive market and a surplus supply. If, and only if, the salesman has carefully and systematically sold the product idea and benefits in the past, will he be able to sell the delivered product.

#### Salesmanship Is a Science

Salesmanship is not an art but a science. It is just like the science of farming. The farmer must plant the seed, cultivate it, weed the plant, overcome the natural resistances, harvest the crop and deliver the product. It takes time and requires a continuing and repeated effort. There is no other successful formula. Be-

cause this is the answer, a good place to start the correction action is to refresh memories on the question: What is salesmanship?

Salesmanship is the art of presenting to the people the right of choosing a product or service, from a competitive market, that will improve their economic, social or moral standards of living.

There are three qualifications for salesmanship: 1. Service salesmanship; 2. negotiation salesmanship; and 3. creative salesmanship.

Jack Lacey of the Lacey Sales Institute says that service salesmanship is the type of selling in which when the prospect and the salesman come in contact with each other the prospect has already decided that he needs something. He is determined to buy and all that is necessary for the salesman to do is to render the service necessary to make the product physically available, and the sale is completed.

In negotiation salesmanship only a part of the necessary decisions has

(Continued on page 13)

## SHOP TALK



### OVER THE COUNTER

By Emmet J. Hoffman  
Croplife Marketing Editor

Farm chemical retailers can usually profit from the selling experiences of retailers handling other lines because basic selling principles apply to all types of merchandise and services. In this connection, the experiences of a retailer who has won the "Brand Name Retailer of the Year" award and several certificates of distinction awards for unusual presentations and strong promotions of brand name goods, are of interest.

This retailer, F. Hardy Rickbeil, owner of Rickbeil's, a Worthington, Minn., hardware, furniture and appliance store, has received national attention for the successful sales he stages. His selling events

have the reputation of attracting large crowds of shoppers through the front door. Mr. Rickbeil suggests eight key points in planning a sale and follows through carefully when he stages his events. Here are the eight points:

(1) Find a logical cause, a reason to justify having a sale. Customers want a good reason for a sale.

(2) Plan your purchases of sale items in advance, with the idea that lower prices (and profit margins) can produce higher net profits if you produce the faster turnover that a sale should create.

(3) Set up advertising, display, and promotional gimmicks that create

a carnival atmosphere. Some dealers pipe in circus or band music to help the mood. Get suppliers to help out with broadsides, mailing cards, giveaways, and display novelties. Prepare a day-to-day ad campaign for newspapers and radio.

(4) Have a different offering for each day. Constant change holds interest. Use truly low-priced goods, contests, and demonstrations with free food samples as the lure. Try to have several contests on tap.

(5) Keep sufficient back-up stocks of all advertised items. What is worse than demand for advertised stocks you have sold out?

(6) Have day by day staff meetings. Let salesmen know what you are planning, and don't hesitate to thank salesmen for their part during a hectic sale.

(7) Have the local press play up contests and contest winners. A lot of free space will be missed if you don't.

(8) After the sale, be sure to take up prices of items advertised as "reduced" to original levels. Then your customers will know they were truly on sale. And your next sale will have more impact because shoppers will know that you really do offer bargains.

As mentioned before, Mr. Rickbeil says that customers naturally expect some justification for sudden claims to lower prices, carload purchasing, and the carnival atmosphere of a true sale. An anniversary, changing seasons, a slow time of year when stocks are heavy, a post-holiday clearance, rebuilding or expansion program offer the wedge, the reason for a sale.

At Rickbeil's, a 50th anniversary of the founding of the firm offered the perfect opportunity for an extra large promotion. Because a half century was being marked, gold was used for display.

The 21-day (business days) event, saw gold foil covering display doors and windows with only peep holes left open, to add to the carnival atmosphere. The entrance and walks were sprayed with gold lacquer. A thousand gold balloons were given to children.

The gold theme was carried out even to gifts. Persons who bought \$100 worth of merchandise in the sale were given dinner sets trimmed in gold.

How do you plan for a really big sale?

Rickbeil's used almost every outlet available. Special displays were built. Popular items were bought, some in carloads, for sale pricing. An eight-page broadside, jam-pack-

(Continued on page 15)

#### Another Croplife Service to the Dealer: Clip Out This List of Names for Immediate Reference

### POISON CONTROL CENTERS NEAR YOU

Below are listed poison information centers now in operation, along with the names of their directors and where they may be reached on an emergency basis, day or night.

Experts at these centers have been thoroughly trained in the toxicology of pesticides and are prepared to give accurate information on the course of action to be taken if local physician should be unavailable or unacquainted with antidote for specific pesticide.

#### Keep This List Handy Near Your Telephone!

##### MARYLAND

Baltimore, University of Maryland Hospital, University Park, Samuel Bessman, M.D., LE 9-0320

Baltimore, Johns Hopkins Hospital, Thomas E. Reichelderfer, M.D., OR 5-5500

##### MASSACHUSETTS

Boston, Boston Committee for Control of Accidental Poisoning in Children, 300 Longwood Avenue, Lendon Snedeker, M.D., BE 2-2120 or BE 2-7800

New Bedford, George Starbuck, M.D., 68 Arnold Street, 9-6211, Ext. 275  
Worcester, Worcester City Hospital, 71 Jacques Street, Robert D. Cox, M.D., Jacob Brem, M.D., PL 6-1551

##### NEW JERSEY

Atlantic City, City Hospital, Walter B. Stewart, M.D.  
Newark 7, Babies' Hospital, 15 Roseville Avenue, William H. Fost, M.D., HU 2-6200  
Upper Montclair, Mountainside Hospital, Harold R. Mancusi-Ungaro, M.D., MO 2-7375

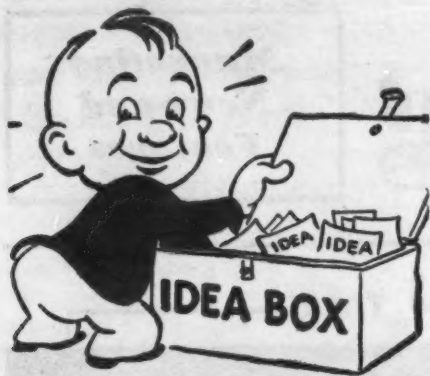
##### NEW YORK

New York City, Department of Health, Harold Jacobziner, M.D., WO 4-3800, Ext. 680

##### PENNSYLVANIA

Harrisburg, Dauphin County Medical Society, 1000 North 2nd Street, Rosemarie Torsky

Next week Croplife will present a list of poison control centers in the states of Florida, Georgia, Kentucky, North Carolina, Tennessee, and Texas. These lists were compiled by the National Agricultural Chemicals Assn., 1145 19th St., N.W., Washington 6, D.C.



## What's New...

### In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

#### No. 6571—Insect Spray Chart

The Hanson Equipment Co. has available, without charge, a file folder containing an identification insect spray chart. It contains up-to-date information on how to spray and what chemicals can be used to protect fields from crop-damaging insects, according to company officials. Common insects are listed along with illustrative color drawings. To secure the file folder check No. 6571 on the coupon and mail it to Croplife.

#### No. 6575—Portable Ribbon Mixers

A new line of portable heavy duty horizontal ribbon mixers is in production from 0.34 cu. ft. working capacity to 20 cu. ft. working capacity, announces the Young Machinery Co. The mixers are available in carbon steel, stainless steel, and Monel metal with or without heating or cooling jackets and move freely on heavy duty industrial casters. They are furnished with single or double ribbon or ribbon and paddle agitators. The mixers have dust-tight, gasketed, hinged covers with quick opening clamps, marine-type compression packing glands and anti-friction outboard bearings with sealed roller bearing pillow blocks—one fixed and

one floating. Discharge is made either from the center or the end by a slide gate or a worm gear operated plug gate. The portable mixers are furnished as complete units with motors and drives. They are recommended for mixing dry, free flowing powders or granular materials. Secure complete details by checking No. 6575 on the coupon and mailing it to Croplife.

#### No. 6573—Company Booklet

The American Chemical Paint Co. has published the charter issue of the "ACP Pioneer," a 24-page booklet devoted to information about the company and its products. A chapter, with a number of pictures and illustrations, is devoted to the agricultural chemicals division. Described are research and development facilities, synthetic plant growth regulators, weed control products and the company's research farm. The booklet may be secured by checking No. 6573 on the coupon and mailing it to Croplife.

#### No. 6570—Repellent Base

The Montrose Chemical Co. announces it is now offering the new insect repellent material, Diethyl Toluamide, which was developed by the

U.S. Department of Agriculture. Diethyl Toluamide (DET) is described as an all-purpose insect repellent and it has been released for commercial use. DET can be applied directly to the skin or clothing and protects the user against mosquitoes, ticks, chiggers, fleas and biting flies for up to eight hours, it is claimed. Montrose is offering a high concentration meta isomer of Diethyl Toluamide to formulators of insect repellent lotions and similar preparations. Secure complete details by checking No. 6570 on the coupon and mailing it to Croplife.

#### No. 6572—Natural Mineral Products

The Minerals & Chemicals Corporation of America has published a technical information folder No. 1004 entitled, "Natural Mineral Products." The folder provides complete details of the company's range of products, including a carrier and diluent for formulating granular pesticides, fungicides, herbicides and soil fumigants and other products used as carriers, diluents, extenders and conditioners in farm chemicals. Secure the folder by checking No. 6572 on the coupon and mailing it to Croplife.

#### No. 6574—Power Sprayer

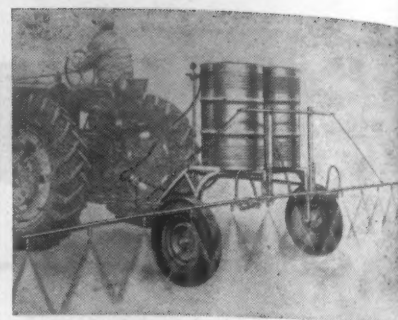
A new 3-gal. per minute "Mighty-Mite" power sprayer has been introduced by the F. E. Myers & Bro. Co. The sprayer is said to provide the benefits of boom spraying with up to a 21-ft. swath. Rough ground has little effect on the spray pattern of the sprayer, resulting in a uniform spray coverage, company officials said. The sprayer weighs approximately 40 lb. It is designed for 30 to 60 lb. operating pressure although the pump itself is capable of producing 300 lb. maximum pressure. Secure complete details by checking No. 6574 on the coupon and mailing it.

### Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

#### No. 6565—Spray Equipment

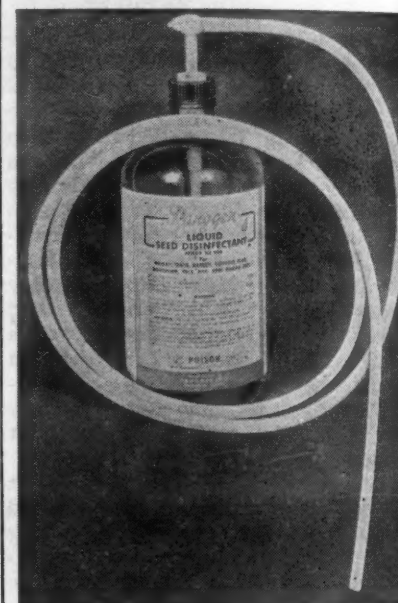
Details of its new "Field Master" line of spray equipment have been announced by the Broyhill Co. The line includes the model FM-1 boom sprayer, the model FM-2 boomless sprayer and the model FM-3 hand gun kit and boomless sprayer. The boom sprayer is a 6-row, 21-ft. "stainlized" boom with 13 "TeeJet" nozzles and 4-way hinge flexibility. The trailer is equipped with 15-in. wheels and two 55-gal. drums. A 115-gal. capacity



steel or aluminum tank is optional equipment. The pump unit includes a "Hypro 6200" pump and torque chain, suction screen, 200-lb. pressure gauge, by-pass valve and single control valve. To secure more information about the "Field Master" line check No. 6565 on the coupon and mail it to Croplife.

#### No. 5702—Liquid Seed Disinfectant

Panogen, Inc., is distributing liquid seed disinfectant in small sizes for home treating. The liquid is available in pint, quart and gallon bottles. A liquid dispenser is designed for use with the bottles. The dispenser attaches directly to the bottle and delivers the correct amount of disinfectant to the seed being treated,



company officials say. Full details will be mailed without charge. Check No. 5702 on the coupon and mail it to this publication.

#### No. 6566—Nematode Chart

The Shell Chemical Corp. has available a nematode chart in black and white, 8½ by 11 in. The chart is available to those interested in nematodes. Secure it by checking No. 6566 on the coupon and mailing it to Croplife.

#### No. 6563—Plant Growth Stimulant

Merck & Co., Inc., chemical division, has prepared a new folder on its product trade-named, "Gibrel," a plant growth substance which belongs to a family of relatively new chemicals, the gibberellins. The folder states that the substance "can increase plant size up to three times over normal, break dormancy and apical dominance, advance flowering time, bring about earlier seed production, eliminate transplanting shock and improve fruit set." Investigations on the substance have been completed on a number of flowers and ornamentals. A wide variety of applications are under study, the folder states. Secure the folder by checking No. 6563 on the coupon and mailing it to Croplife.

#### No. 6578—Safety Information Bulletin

A reproduction of the feature, "A Dozen Hints for Safe Use of Pesticidal Chemicals" which appeared in Croplife recently, is available to dealers. As illustrated here, it is printed on 8½ x 11 stock suitable either for

#### Send me information on the items marked:

- |   |   |
|---|---|
| <input type="checkbox"/> No. 5656—Loaders           | <input type="checkbox"/> No. 6569—Pump Units            |
| <input type="checkbox"/> No. 5672—Bag Conveyor      | <input type="checkbox"/> No. 6570—Repellent Base        |
| <input type="checkbox"/> No. 5696—Conveyor          | <input type="checkbox"/> No. 6571—Insect Spray Chart    |
| <input type="checkbox"/> No. 5702—Seed Disinfectant | <input type="checkbox"/> No. 6572—Mineral Products      |
| <input type="checkbox"/> No. 6563—Growth Stimulant  | <input type="checkbox"/> No. 6573—Booklet               |
| <input type="checkbox"/> No. 6564—Booklet           | <input type="checkbox"/> No. 6574—Power Sprayer         |
| <input type="checkbox"/> No. 6565—Spray Equipment   | <input type="checkbox"/> No. 6575—Mixers                |
| <input type="checkbox"/> No. 6566—Nematode Chart    | <input type="checkbox"/> No. 6576—Insecticides Bulletin |
| <input type="checkbox"/> No. 6567—Weed Control      | <input type="checkbox"/> No. 6578—Safety Bulletin       |

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS  
PERMIT No. 2  
(Sec. 34.9,  
P. L. & R.)  
MINNEAPOLIS,  
MINN.

#### BUSINESS REPLY ENVELOPE

No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Croplife

P. O. Box 67

Reader Service Dept.

Minneapolis 1, Minn.

Mr. Dealer... Post This on Your Bulletin Board

**A DOZEN HINTS FOR  
SAFE USE OF PESTICIDAL CHEMICALS**

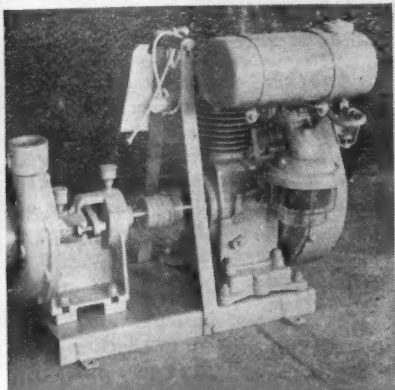
1. READ LABEL... Always read the label before using sprays or dusts. Know warnings and directions on the label before applying the pesticide.
2. STORE SAFELY... Keep sprays and dusts out of the reach of children, pets and livestock. They should be stored outside of the house and away from food and feed.
3. DON'T SWITCH CONTAINERS... Always use sprays and dusts in original containers and keep them tightly closed. Never pour from one container into another.
4. NO SMOKING... Never smoke while spraying or dusting.
5. PROTECT YOURSELF... Avoid inhaling sprays or dusts. When dusted on the body, wear protective clothing and shoes.
6. DON'T SPILL TOXICANTS... Do not spill sprays or dusts on the skin or clothing. If they are spilled, remove contaminated clothing immediately and wash thoroughly.
7. WASH THOROUGHLY... Wash hands and face and change to clean clothing after spraying or dusting. Also wash clothing each day before reuse.
8. COVER FOOD CONTAINERS... Cover food and water containers when treating around livestock or pet pens. Do not contaminate feed ponds.
9. DON'T CONFUSE WITH HERBICIDES... Use separate equipment for applying insecticide-herbicide mixtures in order to avoid accidental injury to desirable plants.
10. DISPOSE OF EMPTIES... Always dispose of empty containers so that they pose no hazard to humans, animals or valuable plants.
11. REMEMBER RESIDUES... Observe label directions and cautions in long residual or selective portions of plants within the limits permitted by law.
12. CALL DOCTOR IF ILL... If symptoms of illness occur during or shortly after spraying or dusting, call a physician or get the patient to a hospital immediately.

Reprinted from Croplife, April 23, 1957

hanging on a bulletin board or as a mailing piece to be sent to farmers in the dealer's community. Single copies are free. A nominal charge is made for quantities. (Quantity prices will be furnished on request.) Check No. 6578 on the coupon and mail it to Croplife.

**No. 6569—Pump Units**

The Nutra-Flo Liquid Fertilizer Equipment Co. is producing two pump units, one with a 2 h.p. motor capable of handling 50 gal. per minute and having a 50-lb. pressure, the other with a 1½-in. pump and a 3½ h.p. motor capable of pumping 150 gal. per minute. Both can be used for pumping non-corrosive liquid ferti-



lizer, water and other normal uses for pumps. They are specifically designed for pumping liquids heavier than water. The shaft on each is stainless steel and the housings are of iron. In the picture here a gasoline engine is direct-mounted. Electric motors may also be used. Secure complete details by checking No. 6569 on the coupon and mailing it to Croplife.

**No. 6567—Weed Control**

A new folder entitled, "Control Perennial Weeds and Grasses With Pennsalt Sodium Chlorate," has been produced by the Pennsylvania Salt Mfg. Co. of Washington. The product can be applied either as a spray or as dry crystals, states the folder. The product is packed in 100-lb. steel containers. The folder lists product description, general information, directions for use, application rate charts and cautions in using the product. Secure the folder by checking No. 6567 on the coupon and mailing it to Croplife.

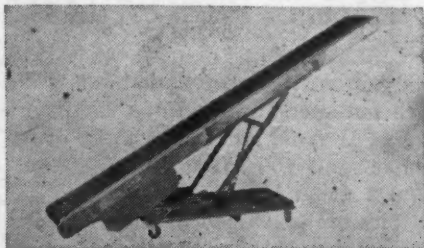
**No. 6576—Insecticides Bulletin**

A technical bulletin of information about its Perthane insecticides has just been issued by the Rohm & Haas Co. Designated by the company as a formulation and labeling guide, it is of interest to formulators of agricultural chemicals. The bulletin contains suggested labels, giving directions for use of the product in controlling cabbage loopers, cherry fruit flies, leafhoppers and other insects. Also included are suggestions for formulat-

ing technical Perthane into dusts, wettable powders and emulsifiable concentrates. This bulletin number AG-82 may be obtained by checking No. 6576 on the coupon and mailing it to Croplife.

**No. 5672—Bag Conveyor**

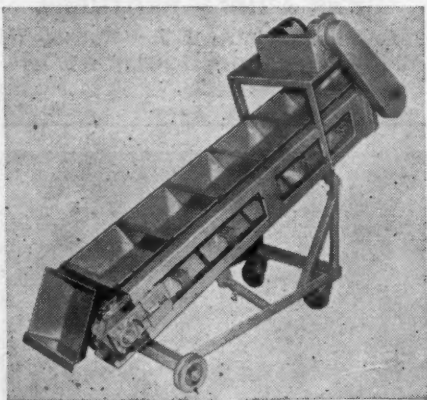
A new aluminum bag conveyor is being offered by the Burrows Equipment Co. The Burrows "A-Series" conveyor is made of heavy gauge



aluminum alloy and has a 12-in. three-ply "Rib-Flex" belt. It is available in lengths from 10 to 18 ft. The unit can be furnished with three different hydraulic lifts and is made to fold for quick storage in small areas. For further details check No. 5672 on the coupon and mail it to this publication.

**No. 5696—Conveyor**

Details of a conveyor for conveying grain, chemicals, powder, liquids, scrap and other products have been announced by the R. T. Sheehan Co. Corrosive materials can also be conveyed by using stainless steel troughing buckets, according to the company. The length, width, and shape are adapted to suit the application.



The conveyor can be made portable or stationary and has a 14-in. minimum height from the floor. Company spokesmen claim that the elimination of troublesome hinges means savings in maintenance costs. Check No. 5696 on the coupon and mail it to secure complete details.

**No. 5656—Loaders**

A new line of tractor-mounted front-end loaders is announced by the Superior Equipment Division of Superior Pipe Specialties Co. The loaders feature a tubular frame, part of which acts as a hydraulic oil reser-



voir. Bucket rams are mounted so that they cannot "spring" and hydraulic piping is enclosed in loader arms for protection. The loaders can be mounted on most models of low silhouette four-wheel industrial tractors. Check No. 5656 on the coupon and mail it to secure complete details.

**No. 6564—Agricultural Chemicals Booklet**

The Shell Chemical Corp., agricultural chemical sales division, has prepared a 32-page booklet about its products, their crop and non-crop uses and equipment for applying them. The booklet is "designed to be helpful in answering questions about aldrin, dieldrin, endrin, D-D, Nema-gon and allyl alcohol." Additional booklets that go into more detail about chemical pest control on specific crops are listed. To secure the booklet check No. 6564 on the coupon and mail it to Croplife.

**IMC Completes Big Superphosphate Shipment**

BARTOW, FLA.—International Minerals & Chemical Corp. said recently that it established a nationwide record when the largest cargo of triple superphosphate in the history of the phosphate industry moved from Tampa to New Orleans.

The shipment, which exceeded 11,500 tons, was carried out as an experiment by the company in the large-scale movement of phosphate from Tampa to a river port for delivery by barge throughout the Midwest. The shipment was carried aboard the liner Edith, which was chartered for the journey.

**MONSANTO DIVIDEND**

ST. LOUIS—The board of directors of Monsanto Chemical Co. has declared the regular quarterly dividend of 25¢ a common share payable June 15 to holders of record May 24.

**Atlas Announces Scholarship Program**

WILMINGTON, DEL.—Atlas Powder Co. this year will add two Atlas Merit Scholarships to the company's college student assistance program, now in its fourth year.

Ralph K. Gottshall, president of Atlas, said that winners of the new Atlas Merit Scholarships will be selected by the National Merit Scholarship Corp. The scholarship corporation conducted competitive examinations last fall in high schools throughout the country to choose winners both for its own National Merit Scholarships and for merit scholarships given by cooperating sponsors.

The Atlas awards will also release matching funds for two additional National Merit Scholarships, bringing to four the number of scholarships actually made possible by the Atlas Merit Scholarship grants.

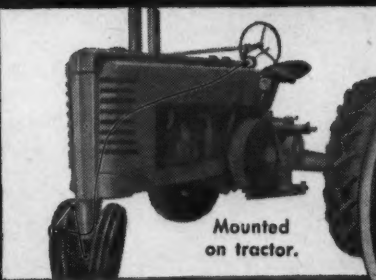
In another phase of the company's program, six colleges will receive direct scholarship grants of \$1,000 each, to be awarded to one or two senior students in chemistry, physics or engineering at each of the schools.

**SOYBEAN CONTEST**

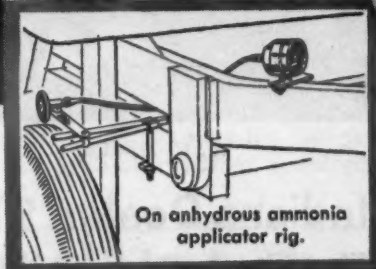
MARION, S.C.—Marion Cotton Oil Co. will sponsor a five-acre soybean contest again this year. Contestants may use any fertilizer or cultural practices they desire. Last year Marion County produced about 2,500 acres of soybeans for oil purposes, J. C. King, county agent, said. This year, acreage will be in excess of 5,000, if farmers carry out their intentions.

**SAVE CROPS AND MATERIALS**

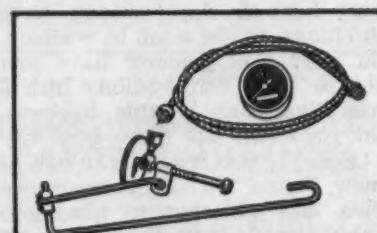
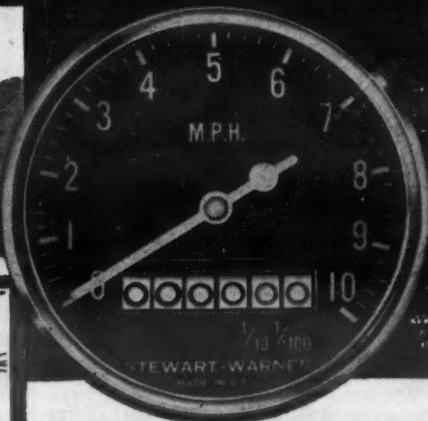
with more uniform application of fertilizers, insecticides, weed killers, seeds!

**INSTALL A STEWART-WARNER  
FARM SPEEDOMETER**

Mounted on tractor.



On anhydrous ammonia applicator rig.



Speedometer Kit includes: speedometer head, flexible shaft, mounting and drive equipment, and installation instructions.

A Stewart-Warner Farm Speedometer can pay for itself in one season! Instantly shows the speed for most economical coverage! Measures over-the-ground speeds up to 10 miles per hour—with dial subdivided to show gradations of ½ mile per hour. Records distance by showing footage in tenths and hundredths of a mile!

**Universal Mounting!** Can be easily installed on any wheeled vehicle.

**Accurate!** Gives true record of speed and distance traveled—regardless of

terrain, condition of soil, engine rpm or gear ratio.

**Rugged!** Weatherproof, shock-resistant. Mechanism enclosed in cadmium-plated steel case.

See your dealer today, or write:

**STEWART-WARNER**Instrument Division, Dept. HH-57  
1840 Diversey Parkway, Chicago 14, Illinois



Doing Business With

## Oscar & Pat



A tall, middle aged man with rimless glasses stepped into the fertilizer store showroom and approached the railed-in enclosure which separated the showroom from the office. The fellow was Merton Hammersmith, a local insurance man, and he radiated the usual enthusiasm and confidence of his profession.

"Ah, Mr. Schoenfeld!" he said, a wide smile on his face. "How are you this wonderful morning?"

Oscar looked out the window at the cloudy sky and a puzzled look came over his face. "It's going to rain," he announced practically. "And I don't need any insurance."

The insurance man chuckled, as though the reply was a joke.

"You have an ad in this week's Clarion," he said. "You want a woman to work in your office for a month."

Oscar nodded. "Yes, Tillie is going to take an extra two weeks vacation without pay, and we need some one to take her place, beginning June 1."

"I see. I see," said the insurance man, savoring his words, a merry twinkle in his eyes. "Could you use a woman of, say, about 55?"

Oscar frowned. "Ach, that is kind of old. We would like a younger one. But if she knows how to bookkeep, and she will work cheap."

"I'm sorry, but she is not a bookkeeper," said the insurance man, "but I am sure she can be pleasant to customers."

"Pleasant! We do not need a woman for that. We need one who can bookkeep, who can type, who can take shorthand. Can this—this woman you are talking about do this?"

"I don't think so," the insurance man said, apparently not the least rebuffed.

Oscar flushed. "Well, what goot is a woman like that in this business, or any other business? She is not trained in anything for a store or shop."

"That's it," admitted the salesman with a smile.

"Well, who is she?" Oscar asked. "Who can be so dumb that she can expect to get a job in a business when she can't do any of them things?"

The salesman wet his lips. The smile did not leave his face. He leaned forward and looked intently at Oscar. "That woman, Oscar," he said quietly, "is your wife!"

Oscar blinked as though some one had thrown a wet rag against his face. "My wife?" he echoed automatically.

The salesman nodded brightly. "If you died tomorrow and she had to support herself, she wouldn't have much chance to get a job in business, would she? You yourself have just agreed to that. You wouldn't hire a woman like that in this business, would you? Ah, but there is a way out, Oscar. If you would take one of our new, liberal \$15,000 life insurance policies, and add that to what you probably already have, then your wife wouldn't have to get a job for awhile after you died. She could have some money to take a course at secretarial school and wise up, and then she could get a good job somewhere, and—"

"Wait a minute!" thundered Oscar, his face purple. "If I die my wife doesn't have to work. Ach, I have plenty of money salted away in bank stock and other good safe investments. You—you mean you haven't got a woman for that job—that you came in here just to try to sell me insurance?"

The insurance man smiled brightly. "Well, why not, Oscar? It's a good lead, isn't it? You are a busi-

ness man. You know how those things go. I saw your ad in the paper. I got an idea, and over I came. Darn good approach, isn't it?"

"It is not!" Oscar snapped. "I do not like stuff like that. We have enough foolish ideas around here the way it is. Ach, and most of them come from there!" He pointed at Pat's empty chair. Abruptly, he swung back to his discount work.

Merton Hammersmith was not daunted. "Oscar, even if you don't feel the need for more personal life insurance to help your wife over the financial hump when you die, surely you should be interested in our special partnership insurance. What would happen to this business if you would die suddenly?"

Oscar swung around quickly. "It would go kapoot! And fast, too. That, that dumkopf don't even know if we are behind or ahead of last year. All he does is sell—like you!"

"And if Pat died, what would happen to this business, Oscar?" Hammersmith asked levelly. "And if you didn't have partnership insurance?"

Oscar's eyes narrowed. "Then, everything would be wonderful. That business would be the best in the world. Everything would run smooth, because, ach, it would have a manager, who would know what he was doing—me!"

The salesman was used to objec-

tions. "Then, if you are so important to this business, all the more reason why the company should carry a life insurance policy on you, with the company as beneficiary."

"Get out!" Oscar thundered. "We are not spending anything for insurance! Himmel, all I have to do every day is tell you salesmen to get out, and I mean it!"

The smile vanished from Merton Hammersmith's face, and for the first time, a look of discouragement crept into his eyes. "All right, Oscar, but you'll be sorry," he said. He moved toward the door and on the way passed Tillie's desk.

"I hope you have a pleasant vacation," he said. "Would you—would you like a little travel insurance for that trip, just to make sure—?"

Tillie shook her head. The salesman shrugged. "Guess this isn't my day, but you can't blame me for trying. We're always on the ball, we good insurance men. I made plenty last year. Just because I tell myself I gotta make six calls a day, six days a week. It's as simple as that. Well, so long. I've still got two calls to make today."

### JOINS SCHELM BROTHERS

EAST PEORIA, ILL.—Robert R. Maloney has joined Schelm Brothers, Inc. here as controller.



W. F. Hilfiker



Dan Hardwick, Sr.

## Indiana Dealer, 91, Wins Spencer Contest To Find Oldest U.S. Fertilizer Retailer

KANSAS CITY—Results of a contest held to find the oldest fertilizer dealer in the United States, have been announced by the editors of "TFD," fertilizer trade publication of Spencer Chemical Co.

The contest winner, who still helps operate a 90-acre farm in addition to conducting his fertilizer business, is 91-year-old W. F. Hilfiker of Portland, Ind. Runner-up was 88-year-old W. F. Haenke of Gilbert, Minn.

In another division of the contest, 75-year-old Dan Hardwick, Sr., won the award for the fertilizer dealer with the most years of service. Head of the Hardwick Fertilizer Co. in Loris, S.C., he has been in the plant food business continuously since 1897. George F. Voelker, Evansville, Ind., a fertilizer dealer for 59 years, was the second high man in this division. These four top men, who have an

average age of 83 and have been in business for an average of 57 years, will receive engraved plaques from the magazine.

In all, a total of 192 entries were received in the contest with the average age of all dealers represented being 50 years and average length of time in the fertilizer business, 20 years.

Dealers winning honorable mention (age and years in business noted in that order) were: Charles Dodge, 84, 26, Wausau, Wis.; H. L. Lenth, 83, 31, Riceville, Iowa; W. H. Lavender, 80, 36, Weir, Miss.; Alex Trulson, 80, 4, Britt, Iowa; L. Y. Irvin, 79, 55, Cornelia, Ga.; E. Wedeking, 76, 57, Dale, Ind.; R. C. Collin, 75, 56, Mt. Pleasant, Mich.; W. Gillespie, 71, 46, Effingham, S.C.; H. D. Mays, 70, 46, Campbells-ville, Ky., and Max Wilhelmi, 67, 50, Lawrence, Kansas.



By RAYMOND ROSSON

County Agent, Washington County, Tenn.

Sometimes I wonder if agricultural workers as well as dealers, really carry out enough demonstrations with the farmers they serve. It is always very interesting to me, to get reports (facts) from the farmer on just how he came out on the project that I suggested for him to try out.

For instance, last year we worked with many farmers in regard to their needs in pasture and hay production especially. Here are some figures gotten from grade "A" dairymen as to production of milk under different conditions of course, but mainly, the results obtained were from the amounts of plant food used per acre.

*One farmer spent \$3.70 per acre for each cropland acre for fertilizer and he sold 1,699 lb. of milk per acre, while another farmer spent \$6.21 per acre for plant food and he produced 2,175 lb. milk per acre.*

Another demonstrator spent \$4.07 for fertilizer per acre and his milk production per cow was 4,716 lb., while another farmer spent \$9.33 per acre for fertilizer and his production per cow was 10,922 lb.

*Another demonstration shows this: One farmer spent \$5.66 per acre for fertilizer and each cow produced \$317 per head above what feed was purchased, while another man spent \$6.21 for fertilizer per crop acre and his cows produced \$438 per head above what feed he purchased.*

Mr. Dealer, if we'd look at the overall picture and check with our customers and demonstrators, all of us who work with and serve our farmer friends, could be of much greater service to agriculture and the entire economy of our country.

### Calspray Announces New Seed Protectant

RICHMOND, CAL.—A new seed protectant for use on cereal grains, such as wheat, oats and barley, has been announced by the California Spray-Chemical Corp. Called Ortho L M Seed Protectant, the product has demonstrated superior control of seed and soil borne diseases in tests conducted throughout the grain growing areas of the country by university and Ortho research personnel, the company said.

Presently available as a concentrated liquid, the product contains two fungicidal components, methyl mercury and 8-Hydroxyquinoline. A feature of the new material is its ability, through its vapor action, to penetrate the minute cracks in the seed coat, assuring more effective distribution of the active ingredient and making the protectant particularly effective in treating hollow grain, Calspray said.

Ortho L M Seed Protectant is dyed a uniform red color and is available in "multi-bung" drums, in a selection of sizes.

### ALMOND BLAST CONTROL

SACRAMENTO—Adequate fertilizers, irrigation and control of fungus diseases and harmful insects are recommended by Roy Jeter, Glenn County farm adviser, to control a severe attack of almond blast in his county.

## KEEP YOUR FOOT ON THE FENCE

(Continued from page 9)

been made, and the salesman must complete the sale by negotiating the balance of the necessary decisions.

In creative salesmanship the salesman starts from scratch. All that he has to work with is a prospect who has a potential need for the product he sells. The creative salesman usually must overcome a great deal of resistance during his approach in order to get the prospect to listen. He must overcome a great deal of resistance to change the prospect's thinking. And he must exercise considerable persuasion in order to get the prospect to buy. In short, he must repeat—repeat—repeat.

A creative salesman is automatically able to make service and negotiation sales, but the service salesman can only make service sales; the ones that come easily!

What are some of the fundamentals in creative selling? Here is a review of some old principles which are not always practiced today.

1. What is luck in selling? These rudimentary principles are involved in every sale made by every salesman:

L: The salesman must have or develop a personality that will cause the prospect to like him, the company and the product.

U: Whatever he sells must be useful or the customer will not be interested.

C: The salesman must be conscientious in presenting himself, his company and product. No misrepresentation can be permitted if he wants to make repeat sales.

K: The salesman must have a thorough knowledge of his product. He must be able to answer all questions fairly with recognition of weak points, counter-acted with the conjunction "but". He must be able to point out the desirable and constructive features of his products.

These basic principles followed consistently constitute the only luck that the salesman will ever find in selling.

2. What are the ABC's of selling?

A. The salesman must get the prospect's attention.

B. The salesman must believe in what he is selling, and thereby impart to the prospect confidence in both himself and his products.

C. The salesman must close the sale. He must be able to get the order.

I cannot offer any magical formula for closing a sale. The man who says he can, is either a victim of an illusion or a neophyte in the game of selling.

Of course, there is more than one way to close a sale, but we are interested only in those which have been proven successful over the years by thousands of salesmen.

To close any sale the salesman must proceed in exactly the same manner as in starting an engine of a light airplane.

1. He must check the plane—the

customer, so to speak—to determine to his satisfaction that the plane is ready to fly—that the customer is ready to buy.

2. The salesman must check the wheel or set the brakes—he gets the customer's attention.

3. He "pulls through the prop" to clear the engine—he feels out the customer to see that he is open-minded for his sales approach.

4. The salesman primes the engine—he primes the customer with his sales story.

5. The salesman applies the starter or "pulls through the prop" to start the engine—with the customer he tries for a "close".

6. If the engine fails to start, he repeats some of the steps and tries again for a start. If the customer does not buy he uses more sales points and tries again for a close.

If he is still unsuccessful in closing, he continues his presentation by taking up other important features of the products. At each logical conclusion he asks for the order. He must attempt to find out why his prospect will not buy and, if he points out a particular reason, it is up to him to overcome that objection. Then he proves that he has done so, and once again asks for the order.

The sales presentation should be made with the "five points close" in mind because this applies to every sale no matter what is sold.

Before anybody can buy anything he must have five separate and distinct buying decisions. Now that is a strong statement, but experience will prove it is true.

1. **The Need:** No one buys anything unless he is first "sold" on the need. When the salesman feels his prospect is convinced of the need for the product, he asks for the order. If he doesn't get the order at this point, he proceeds with—

2. **The Brand:** The prospect may be "sold" on the type of work that the product will do, but he may not be "sold" on the particular brand, so the salesman presents advantages of his products; proves these advantages; and asks for the order.

3. **The Source:** In some instances a prospect may be "sold" on the products, but he may not be convinced that the salesman is the best source from which to buy. In such a case the salesman must convince him or else there is no sale.

4. **The Price:** The salesman may have obtained a favorable answer on the need, the brand, and the source, and still not have closed the sale. The price may be the "thorn in the flesh". There will be no sale unless the salesman can convince the prospect that the quality of the service that can be obtained from his products, justifies the price differential; that the product is worth the price to him. This point to be successfully driven home requires a complete knowledge of products and service by every salesman. He must have an integrated knowledge of the advantages incorporated in his products and service as compared with those of the competitors'. The salesman should never argue price, but point out the advantages of the product and service which should justify the price.

5. **The Time:** Finally, there is no sale unless the salesman can convince the prospect that the time to buy is now.

These points are not necessarily given in any particular order, yet each must be dealt with before any sale can be closed. Knowing this in advance it is easy to check for missing decisions at any stage in the presentation. The salesman should try to get definite commitments on each of these five important points, and then concentrate on any one of them that is missing. If he does this he may avoid talking himself out of a sale.

In these basic fundamentals of creative salesmanship lies the success of

a salesman's production efforts when he has a competitive selling market.

This is not the time or the place to take a vacation from selling. Should you do so and others do not relax from their selling efforts, the latter will gain a competitive edge. If the company cannot sell products, if it does not have products to sell, then ideas should be sold.

A company can scrutinize closely its sales techniques, and improve the quality by participating in an intensive training program. All of the leading firms today are stressing the importance of sales training. If a company rests on its laurels, others will be acquiring a larger slice of the industry's business. If a competitor leaves the door open, it would be foolish not to walk in.

Salesmen in general today are becoming more and more conscious of the fact that their job is gaining professional status.

One of the earmarks of a profession is its sense of responsibility to the community. Professional men do not work solely for themselves, but also for the good of mankind. Surgeons do not operate solely because they want the fee. A professional man combines science and common sense into an art, accompanied with a motive of service to others that is greater than the motive of service to self. They also have a loyalty to a code of ethics. This requirement cannot be ignored by a salesman if he wishes to make selling a profession. When a physician or lawyer violates the code of ethics of his profession, he is ousted from membership, and barred from practice in the profession.

### The Professional Salesman

It is a fact that selling is perhaps still largely in the struggling period, trying to develop and enforce a code of ethics, but the professional salesman is emerging from the midst of our industrial age. The professional salesman is a man who is constantly studying to improve his efficiency. He is a man who serves both the company and the customer—his is a two-way relationship.

When the great majority of sales people sell according to professional standards, so that the public realizes it, then selling will be added to the list of the recognized professions.

The salesman who looks quality, acts quality, and talks quality will sell quality, while his price competitor trails along behind crying, "Mine is just as good." And it is well known what a poor sales story the "me, too" story is.

And finally, selling is "fun". I do not believe in the old trite statement that "he is a born salesman". Everybody is a born salesman. Every person sells every waking hour, in the simple but necessary relationship with his fellow man. Every successful businessman has kept his foot on the fence with his neighbor, in selling himself.

## 169 FFA Chapters Enter GLF Crop Demonstration Program

ITHACA, N.Y.—A record 169 Future Farmers of America chapters in New York, New Jersey and Pennsylvania have entered the 1957 FFA crop demonstration program sponsored by Cooperative GLF Exchange, of Ithaca, N.Y., and GLF retail agencies.

State crop demonstration committees approved plans of 146 New York chapters, 16 in New Jersey and seven in a pilot Pennsylvania program, according to Paul Taber, GLF assistant director of public relations and information.

Each chapter creates an "outdoor classroom," where members plant a crop common to their area. One half is managed according to practices recommended by the state college of agriculture, and on the other half the boys follow practices most common on farms of their community. Both agriculture classes and area farmers learn results of recommended practices through the demonstration.

State committees review every plan. Committee members are state education officials, FFA and agriculture teacher representatives, Extension Service personnel and GLF men.

GLF retail agencies provide up to \$30 of free materials to participating chapters for their demonstrations. Awards of \$50 go to those judged in the top 10% finishing demonstrations in each state. Second 10% receive \$25. Every chapter successfully completing a demonstration receives a framed certificate of participation. Cost of the entire program totals \$10,000.

Judging is based on the original plan, field evaluation during the growing season and a final report submitted in the fall by the chapter. Committees place emphasis on how well a demonstration was used to teach recommended practices to farmers and agriculture classes.

The program is a chapter activity, not a contest for individuals. All members of a chapter help plan, plant and care for the demonstration crop during the summer.

## Nitrogen Top Dressing Increases Wheat Yields

MORGANTOWN, W.VA.—Wheat yields may be profitably increased by nitrogen top dressing in early spring. Trials conducted by West Virginia University Agronomists on the farm of the Ohio Valley Experiment Station at Point Pleasant for six years have shown consistent increases in yields from early March applications of 25 lb. of actual nitrogen per acre.

Another effect of nitrogen top dressing is to increase the protein content of the wheat. Increases of from one to three per cent in total protein may be expected from 25 to 50 lb. of nitrogen.



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## What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

Construction has begun on the new fertilizer-insecticide plant at Sunny-side, Washington, for Pacific Agro Co., Seattle. The new plant was expected to be completed in time to supply both dry and liquid insecticides to growers during the 1957 season.

Potash deliveries for agricultural purposes dipped slightly during the first quarter of 1957, the American Potash Institute reported. The tonnage for the first quarter was 581,689 tons  $K_2O$  as compared to 599,643 tons  $K_2O$  during the first quarter of 1956.

Stauffer Chemical Co. installed a new unit to produce granular insecticides, at Omaha, Neb. Granular formulations of DDT, aldrin and heptachlor will be made at the plant.

Confidence in the current farm program was reported in Washington to be fading. The soil bank, it was pointed out, has not been able to reduce surpluses.

A new urea plant was brought into production by Shell Chemical Corp. near Ventura, Cal. It makes high analysis nitrogen products. Shell said that this plant is the only one of its type west of the Rocky Mountains.

Establishment of California Chemical Co. was announced by Standard Oil Co. of California. The function of the new company was to consolidate the chemical activities of Standard. The new organization will coordinate the activities of two Standard subsidiaries; California Spray-Chemical Corp. and Oronite Chemical Co.

Last year's agricultural loss attributed to corn borers is estimated by USDA at \$119.5 million. This represents about 3% of the total corn crop. Despite the heavy loss in 1956, it was less than that of the previous year when 155 million bushels of corn were lost. The 1956 loss was 98 million bu.

That microorganisms in a cow's rumen may be able to detoxify some insecticides, thus making them harmless, was suggested by the results of experiments conducted by the University of Wisconsin. It was pointed out that if further research bears out these early findings, it could mean the removal of a hurdle standing in the way of approval of certain systemic organophosphate insecticides on forage crops. It might also mean that several presently-used insecticides can be used on forages with fewer precautions as to spraying date.

Dr. Firman E. Bear, retired head of the soils department at Rutgers University, New Brunswick, N.J., told the fifth California Fertilizer Conference at Fresno that the long-term prospects for feeding the expanding population of the U.S. is good. The application of plant food materials plus widespread irrigation can compensate for the increasing numbers of people in the nation, he said.

An explosion and fire at Monsanto Chemical Company's Nitro, W.Va. plant resulted in five casualties and the hospitalization of a number of additional persons. Financial loss was estimated at \$1 million. The plant's production of methyl parathion insecticides will be halted for several months and of ethyl parathion for as much as six weeks.

Consumers Cooperative, Kansas City, Mo., bought a 40% interest in Missouri Farmers Assn.'s ammonium phosphate fertilizer plant at Joplin, Mo. Annual capacity of the plant is set at 70,000 tons. A pipeline connects it with a sulphuric acid plant owned by Eagle-Picher Co. at Galena, Kansas.

Coastal Chemical Corp. announced that it will construct a sulfuric acid plant at Pascagoula, Miss. as part of its fertilizer installation under construction.

The U.S. Department of Agriculture announced results of experiments with its new herbicides, 4(2,4-DB) and 4(MCBP), both of which demonstrated value as supplements to herbicides presently in use by farmers. In tests made in 1955 and 1956, the new materials were used for weed control in seedling legumes and certain other crops.

Some 1,840 acres of lands in Eddy County, New Mexico, were released by the U.S. Dept. of the Interior for competitive leasing as potash-mining developments. The area is in the vicinity of Carlsbad where a number of potash operations are already established.

Gibberellic acid materials were tested by the New York Agricultural Experiment Station, Ithaca, N.Y., to stimulate the growth of red kidney beans so they may be harvested in a single operation. Success of the technique would aid in mechanical harvesting methods which in turn are more economical than other means.

Three aerial sprayers were awarded contracts to apply 2,400,000 gallons of DDT-oil mixture in three northeastern states in the cooperative federal-state gypsy moth eradication program. The contracts totaled \$1,750,000. Aerial applicators receiving contracts were Lebonair, Inc., Lebanon, Pa.; Chris D. Stolz, Coatesville, Pa.; and Roberts Aircraft, Boise, Idaho. The applications are to be made in New York, Pennsylvania and New Jersey.

Growers of vegetables are expected to use no lesser amounts of pesticidal materials this year despite smaller acreages involved. The reason for this optimism was outlined by Lea S. Hitchner, NAC Assn. secretary who said that reductions in the output of certain vegetables would be offset by larger plantings of other crops which would probably result in good pesticide sales.

The Middle West Soil Improvement Committee organized a Minnesota branch at an organizational meeting in Minneapolis April 9. Function of the new group will be to serve as liaison for the manufacturer, dealer, the university and the consumer to further the use of fertilizer.

The American Potash Institute announced that North American deliveries of potash in 1956 by the seven leading American producers amounted to the equivalent of 2,307,961 tons  $K_2O$ , an increase of 4.7% over 1955 deliveries. Agricultural deliveries in the continental U.S. in 1956 totaled 1,872,704 tons  $K_2O$ , down 5,885 tons from the 1955 figure.



## FARM SERVICE DATA

Extension Station Reports

Giving peach trees plenty of nitrogen fertilizer can greatly improve the quality of their fruit for canning, according to Vincent A. Amato, assistant extension horticulturist at West Virginia University.

This has been shown by studies at the U.S. Department of Agriculture's Fruit and Vegetable Products Laboratory in Prosser, Wash., and at the Washington State Agricultural Experiment Station.

Elberta peach trees used in this work received applications of nitrogen varying from none to 2 lb. per tree annually. Leaf analysis to determine the amount of nitrogen present in the tree showed a range from 1.59% to 3.20%. Trees were grown on orchard grass, rye or vetch. Samples of their fruit were harvested, processed (canned), and then rated for quality both by chemical tests and by taste panels.

Trees that had a high nitrogen content in their leaves produced high-quality canned fruit with good color and texture. By contrast, the low-nitrogen peaches were sour, fibrous, soft and frequently unpalatable when canned, even though they had been firm and attractive in the fresh state. High-nitrogen peaches also retained their shape much better than low-nitrogen fruit when steam was applied before peeling.

Researchers who worked on this study point to several things that should be watched for when Elberta trees are heavily fertilized with nitrogen. There is greater variation in the timing of fruit maturity and greater possibility of preharvest drop. For low-nitrogen trees, 1 or 2 pickings may be enough, but with high-nitrogen trees, 4 or 5 pickings are more desirable. Also, because high-nitrogen Elbertas are riper than their color indicates, they should be picked with much more green color than low-nitrogen fruit to avoid bruising.

★

A nitrogen, phosphorus and potash fertilizer in a 1-2-2 ratio for silt loam, and a 1-2-3 ratio for sandy loam is generally good for home gardens in Delaware, according to Robert F. Stevens, extension horticulturist at the University of Delaware.

It is often desirable to broadcast two to three pounds of fertilizer per 100 square feet before planting, the specialist says. This can be applied before plowing or spading, or it can be put on before planting and worked into the soil for two or three inches.

Additional fertilizer can be planted in 2 furrows about three inches deep on each side of the row to be seeded. Apply the fertilizer in the furrows at the rate of two pounds for each 100 feet of row, using one pound on each side of the row.

Starter solutions—high analysis fertilizers dissolved in water—are good at transplanting time, Mr. Stevens suggests. Sidedressing with a nitrogen-carrying fertilizer, say 10-10-10, at one pound per 100 feet of row after plants are started is a good plan, the horticulturist advises.

★

The iris borer, a garden pest which may go unnoticed until plants are seriously damaged, has been effectively controlled by sprays of DDT at the rate of 1 teaspoon of 25% emulsion in 1 gallon of water.

Spraying iris leaves at 7- to 10-day intervals from mid-April through late May killed most young larvae of the borer in an experiment conducted by

John C. Schread, an entomologist at the Connecticut Agricultural Experiment Station.

Two phosphate insecticides also proved effective in iris borer control. These materials were applied in August, when many of the borers were fully grown. Both Thimet and Trithion emulsions used at the rate of 2 teaspoons in 1 gallon of water killed the borers in the iris rhizomes and in the soil. These materials were sprayed on the leaves, exposed rhizomes and surface of the soil.

★

Complaints of grapes turning white on the vines indicate that downy mildew is present in the vineyard, says Dr. Alvin J. Braun, plant disease specialist at Cornell's New York State Experiment Station at Geneva.

Fredonia, Niagara and Catawba grapes are especially susceptible to infection of the fruit by downy mildew, explains Dr. Braun. The Concord grape is virtually immune from this disease but is susceptible to black rot and powdery mildew, he adds.

Good control of downy mildew can be obtained with fixed copper and lime sprays both in commercial and home vineyards, according to the station. Where the fixed copper material contains about 50% metallic copper, it should be used at the rate of two pounds per 100 gallons, or about one third ounce per gallon where only a few vines are to be sprayed. Spray lime is added at the rate of four pounds in 100 gallons.

Materials containing lower percentages of metallic copper should be used at correspondingly higher concentrations. For home plantings most of the copper sprays with lime added according to the directions on the package will give satisfactory control.

Four properly timed applications are effective in controlling black rot and powdery mildew as well as downy mildew. The first application is made immediately before the grapes bloom, with a second immediately after bloom. A third spray is applied seven to ten days later, with a fourth application two to three weeks after the third spray. Proper timing of all sprays is essential to effective control.

### System for Predicting Pest Outbreak Developed

GENEVA, N.Y.—Entomologists at the New York State Experiment Station at Geneva have developed a system for predicting the severity of outbreaks of the major insect pests of sweet corn in the Hudson River Valley where sweet corn is the leading vegetable crop.

Observation of seasonal temperatures which influence the life cycle of the pests make possible predictions of intensive, medium and light infestations in time for adjustments of spray schedules for the most economical control.

Sweet corn sprayed in accordance with these predictions in 1956 produced 95 to 98% of ears free of insect injury, while nearby unsprayed plantings had only from 24 to 70% clean ears.

### DELAWARE BORER LOSS

NEWARK, DEL.—Delaware corn borer damage in 1956 averaged \$174 per farm, according to the University of Delaware. This loss was an increase of 45% over that of 1955. Surveys last year indicated that 74% of the corn plants were infested with counts averaging 243 borers per 100 plants.

## New England News Notes

By GUY LIVINGSTON  
Cropolife Special Correspondent

The largest apple crop in many years and a complete freeze-out of the peach crop are seen in New England orchards. Low temperatures were responsible for both the hoped for bumper apple crop and the destruction of the peach crop.

Last May 24, the region experienced a severe frost. Orchard men point out that the apple tree leaves were still furled in their protecting buds when the cold air hit, so when warm weather returned to the orchards, the plants made a normal growth of leaves and twigs, even though the flowers had been destroyed.

During the summer months the leaves made plenty of starches and sugars, and because there were no growing apples to be ripened, this new food was stored into millions of flower buds for the 1957 spring-time.

Gordon Scotland, orchard manager of the Waseeka Farms in Ashland, Mass., which are on a hilltop, reported the 20 degree cold of last January did little harm to pear and apple trees, although he expects slight damage has been done to the Gravenstein apples. Given normal, sunny Maytime weather, he expects the heaviest "set" of apples for many years. However, he reported, the cold January spell killed all the buds on his peach trees, and he expects some damage to the branch tips will show up. Plums and cherries also suffered damage.

Mrs. Mary Leombruno, with orchards bordering both the Boston-Worcester Turnpike, and the new Toll Road in Westboro, Mass., reports a complete loss of the flower buds on peaches, plums and cherries last winter. The apples, however, are in good condition. Richard Curtis, owner of the Curtis Orchards in Marlboro, Mass., reports his apple and pear trees escaped injury, but his peach crop is a complete loss. He expects the branch tips of his peach trees have suffered a 10 to 15% loss, but the full extent of the wood damage will not be known until the pruning is completed.

### New Pest Threatens

A new stinging pest, the Argentine fire ant, is posing a threat to New England crops, entomologists warn. The stinging, mound-building fire ant, which destroys crops and attacks human beings and animals, is inching its way toward New England and the northern part of the United States, they report.

A few hundred ants, if transported from Alabama to New York's dairyland, would be sufficient to infest all of New England within a few years, according to farm experts. The insects can live under almost any climatic conditions, but are retarded somewhat by extreme freezing weather.

### Earthquake Cycle

New England faces a cycle of more frequent and heavier earthquakes, two of the world's most renowned geologists said after four states were rocked by strong shocks. The quake of April 26 was the strongest recorded here in 17 years.

Father Daniel Linehan, S. J., seismologist at Weston College, said that "very definitely" there will be more quakes in the northeastern section of the country. Prof. L. Don Leet, geologist at the Harvard Observatory, said the region is "entering a period of increasingly frequent earthquakes."

Both scientists cited the fact that

three quakes have rocked the region in three weeks—a severe tremor off New Jersey, a local one at St. Johnsbury, Vt., April 23, and the quake of April 26 felt from Monhegan Island, off the northern Maine coast to Springfield, Vt., south to Springfield, Mass., and east to Braintree, Mass.

The earthquake came as an added surprise to farmers of the region, who have been hard pressed by hurricanes, tornadoes and floods in the past five years.

## OVER THE COUNTER

(Continued from page 9)

ed with reduced-price items, contest announcements, staple goods, and special services, was mailed to 24,000 potential customers.

Factory representatives were enlisted as demonstrators. This was so advertised. Full, half, and quarter page advertisements and contests filled the local press. Price-marking cards boldly stating "Founders' Day Sale Price" were hung on every special item.

A novel full-page advertisement done in the format of a classified ad section drew heavy response. And Rickbeil's tied its sale in with a city-wide contest among cooperating merchants. This contest prize was an all-expense trip to Washington, D.C.

Follow through is one of the biggest factors. Having ample stock to back up advertisements, keeping live demonstrations really live, conducting daily staff sales meetings, and making the most of contests and giveaways help bring thousands of extra shoppers to a store. Such over-all planning keeps them there in a shopping mood.

At Rickbeil's, the heavy emphasis was on a "vote for a queen" contest. There were 54 queen contestants chosen from a widely scattered area. Each of the contestant's friends voted heavily in favor of his choice. To stir up interest in the contest, there was ample publicity given on the many prizes to be won.

The queen received name-brand appliances and home-furnishings with a value of over \$1,000. Her first attendant (runner-up) got \$125 worth of prizes; second attendant, \$88; and so on. More than \$1,400 in prizes was given.

The unusual method of selecting a queen kept interest and purchases high. Every \$1 purchase entitled the buyer to one vote for his favorite queen.

Another contest sparked traffic in the appliance section. Visitors filled in an entry blank making them eligible for a drawing with a television set or clothes dryer as prizes. More than 9,000 entries were deposited.

To get an attractive touch in store and window display, Mr. Rickbeil hired a professional window and store display company. The result was the unusual gold display, and hand colored window and store signs.

Mr. Rickbeil set up a gold tie-in display advertising his sale at the local builders' and sportsmen's show. Thousands of shoppers saw the display.

Contests, prizes, demonstrations, giveaways, colorful decoration, and heavy advertising created all the fun and excitement of a circus at Rickbeil's. Such excitement was successful in building day-to-day traffic and a high volume of sales.

### WEED CONTROL CIRCULAR

MORGANTOWN, W.VA. — A new West Virginia University Agricultural Experiment Station Circular, entitled "Weed Control—1957 Suggestions," has been published. The circular was written by Dr. Collins Veatch, associate agronomist, who has been conducting experiments in chemical weed control and other weed control measures for several years.

## IT TAKES GOOD MANAGEMENT

# Superior Pastures Promise Better Days For Livestock Farming in the Northeast

Superior forage plants are giving an increasingly prosperous look to eastern meadows and promise better days for livestock farming there. But it will take equally superior management to cash in on the promise.

Cooperative studies by the U.S. Department of Agriculture and several state experiment stations show that the advantage of these forages depends on how well crop and practice suit a farm's livestock need.

Greatest economy comes from fertile, tillable soils planted to such nutritious species as brome, sudan, and orchard grasses; Ladino clover, birds-foot trefoil, and the new alfalfas; and combinations of a grass and a legume. Such forage crops respond best to superior technology, too, whether they are used for grazing, fresh feeding, or making preserved forage.

One of the major variables observed by V. G. Sprague, Agricultural Research Service agronomist of the U.S. Regional Pasture Research Laboratory, State College, Pa., is the combination of forage crops chosen for a specific farm's needs.

Species, varieties, and strains must not only be superior. They must also fit together well, both in grassland combinations and in seasonal succession, to give the greatest duration of grazing, high nutritive value, and the maximum total forage.

Proper fertilization, harvest timing and recovery time after cutting or grazing all help preserve species balance and total stand. These management practices also benefit quality and yield. Irrigation may be a useful device where facilities are available and other management factors have been raised to the optimum.

Permanent pastures are largely restricted to low-growing species, such as bluegrass and white clover. These pastures are declining in importance, yet still have a place in modern farming. They use nonillable land. The bluegrass-white clover combination is welcome for spring and fall grazing. Timely fertilizing and liming help keep permanent pastures thrifty.

Legumes usually are the key to economical plant mixtures but are most difficult to maintain. Vigorous grasses tend to shade out and starve the legumes. Mr. Sprague suggests that pasturing practices should, therefore, be aimed at retaining the legume.

Forage plant types vary biologically and the harvest almost always favors one species at the expense of the others. For greatest advantage, the conflicting needs must be balanced—the grass curbed at times or otherwise handled to protect the legume.

Seeding grass thin helps some, but proper cutting and fertilization help more. Where legumes have disappeared, nitrogen is needed to boost yield and protein level in pasture grass.

For a closer look at pasture management, consider some grazing possibilities on a typical Central Pennsylvania farm specializing in livestock and cash crops. There's usually small grain to graze in late fall and again in late winter. Permanent pasture will be ready for grazing early in the fall and again the following spring.

On this farm, pasturing through the summer months might largely depend, for example, on orchardgrass-Ladino clover, orchardgrass-alfalfa, or brome-alfalfa mixtures. Sometimes a planting of an annual such as sudan grass is needed for the possible hot, dry periods of late summer.

These combinations would be most

important for both grazing and storage as silage or hay. The handling of these mixtures, especially in the grazing phases, may be the key to success of the program as a whole.

Taking a first harvest of orchardgrass-Ladino meadow when the grass was coming into head—the customary practice—was too late in the State College studies. Although vegetation is heaviest at that time, grass may already have weakened the clover. Starting the first grazing when the grass was 8 or 10 inches high gave nutritious forage and favored the clover. Similarly, cutting alfalfa-grass mixture when alfalfa is in bud, rather than in bloom, gives a better quality hay or silage. Earlier cutting also may give an extra grazing.

There's a question of how important irrigation might become in eastern forage production, particularly since drouths tend to be brief in most of the region. At State College, R. R. Robinson, Agricultural Research Service soil scientist, found one thing clear: in general, forage plants can stand much drouth—even some wilting—before artificial watering becomes a critical need.

Even after a fairly long period without growth, watering caused quick recovery in shallow-, medium-, and deep-rooted species alike. Pure stands of alfalfa and orchardgrass, allowed to wilt and then clipped and watered, produced as much forage at the next cutting as plants under frequent irrigation.

Some eastern forages—especially timothy, brome-alfalfa, and tall oat-grass—haven't responded well to irrigation except in extreme drouth. Continued moist growing conditions may foster diseases and cut fall growth of these plants.

## Gloomicides

The small boy was looking at photographs of his parents' wedding in an album. His father described the ceremony and tried to explain its meaning. Suddenly light dawned.

"Oh!" the child exclaimed. "Is that when you got Mummy to come and work for us?"

★

An official of the U.S. Maritime Commission was approached by a die-hard prohibitionist who wanted to stop a ship from being christened with a bottle of champagne.

"Why, that's the best advertising your cause could want," protested the official. "After that ship has its first taste of alcohol, it immediately takes to water and sticks to it."

★

Mother (to son, with very wet kitten in his arms): You gave it a bath? What towel did you use?

Son: I didn't use any towel. I wrung him!

★

He (on golf course)—"What's your handicap?"

She—"My father told the caddy to keep an eye on me."

★

Try to save some money, if possible. Some day it may be valuable again.

★

Nurse: "You wish to see the young man who was injured in the auto accident? Are you the lady he was with?"

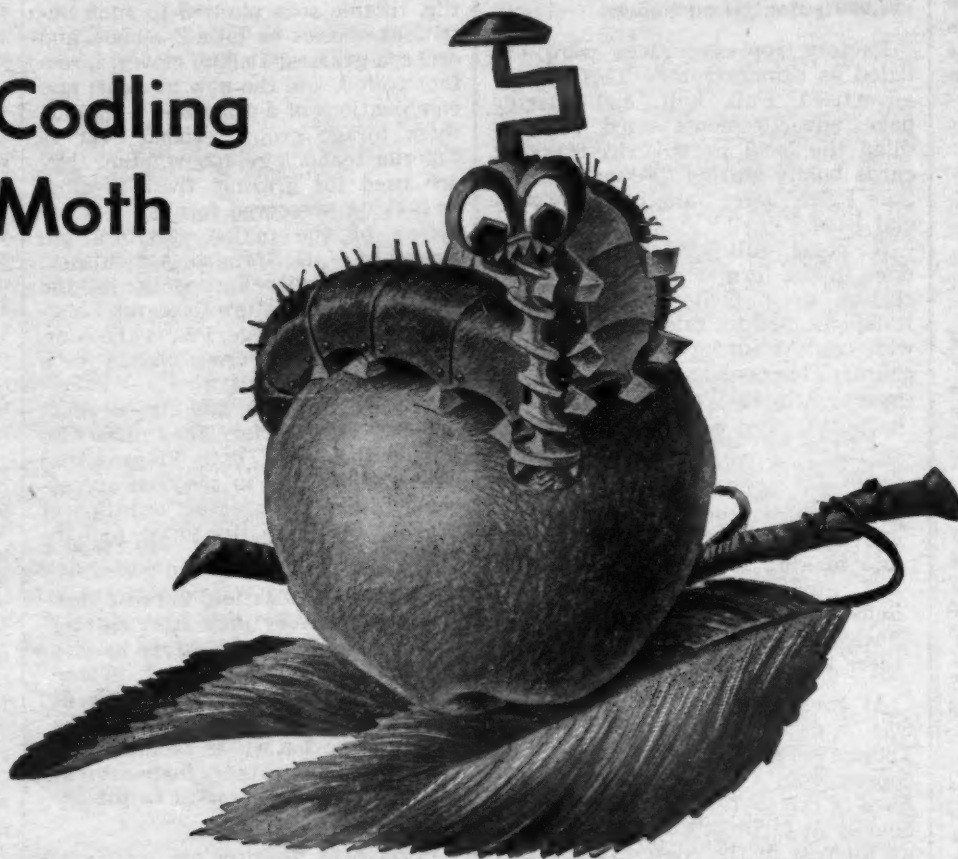
Girl: "Yes, I thought it would only be fair to give him the kiss that caused it."

This article is from the March, 1957 issue of Agricultural Research, published by the Agricultural Research Service, U.S. Department of Agriculture.

# BUG OF THE WEEK

Mr. Dealer—Cut out this page for your bulletin board

## Codling Moth



### How to Identify

The codling moth is a dirty-white or pinkish caterpillar or worm frequently found in apples. Its distribution is all over the United States. In some sections it is called the appleworm.

### Life History of Codling Moth

The worms pass the winter in cocoons in crevices under the bark and in other protected places, usually on or beneath the tree. The moths begin to appear about the time apple trees bloom and some moths are present most of the remainder of the growing season. The tiny white eggs are usually laid on leaves near fruit or on the fruit. The first worms normally begin to enter the small apples 3 to 4 weeks after the blossom petals have fallen. The number of generations in a season ranges from one (with a small part of a second) in the northern apple-growing areas, to three nearly complete generations (and a part of a fourth) in the southernmost producing areas.

### Damage Done by Codling Moth

Although this pest is usually associated with damage to apples, it also attacks pears, quinces, English walnuts and occasionally other fruits. In apples, it causes the familiar

worm holes on the sides and blossom ends of the fruit. The tunnels go completely to the core. These holes are often filled with dark-colored masses, coarse brown or black pellets which sometimes project out of the hole. Such apples are, of course, of small value and the value of fruit thus damaged runs into hundreds of thousands of dollars each year.

### Control of Codling Moth

Since this insect burrows inside the fruit, proper timing of application of insecticides is of utmost importance. The first application should be made just after the blossom petals have fallen, according to USDA information. Recommendations for control materials, timing, application practices, dosages, etc., may vary widely in different states and sections of the country. It is therefore difficult here to attempt to give specific suggestions as to what materials should be used or how they should be applied. Local authorities such as county agents, state experiment station entomologists, and manufacturers of the various pesticides should be consulted for specific information. Labels on pesticide containers carry full instructions on use and dosages. Users should always be urged to study labels carefully before applying any insecticide on food or feed crops to avoid the risk of illegal residues at harvest time.

Codling Moth illustration furnished through courtesy of E. I. duPont de Nemours & Co., Inc., Wilmington, Del.

## FARM PROGRAM

(Continued from page 1)

forces generated by the technological revolution. They are adjusting from wartime to peacetime demands. Their markets are burdened by surpluses which result at least in part from past wartime programs. Obviously, farmers must be protected from the harsh price effects which could result from their exposed economic position, their weak bargaining power and their abundant production. This is a proper function of government. But our efforts should be such as to help our farmers rather than hinder them.

### Acreage Allotments

"With the reduction of surpluses, farmers will feel that acreage allotments should be increased, and will present this view with considerable vigor and with increasing vigor. Under present law, however, farmers are unlikely to receive increased allotments for most of the basic crops, despite surplus reduction. Hence, under present law, disappointment awaits many farm families.

"It would be well to address ourselves to the inadequacies of the present law while the soil bank and the disposal programs are available to facilitate the transition. It is therefore essential that the Congress, with the help of the Executive Branch, give consideration to those provisions of the law which would have the effect of heading farmers right back into another surplus problem as soon as the present one is solved.

"The control program has held in check, to some extent, the production of specific crops under allotment. But the controls failed to prevent an accumulation which, a year ago, reached the highest levels in history. When acreage is restricted by allotments, farmers naturally select their best land, intensify operations and increase yields per acre.

"Shortcomings of controls for the basic crops have led to what will probably be the two biggest and most expensive operations in the history of agriculture—the surplus disposal program and the soil bank. Even if controls were to work properly for the basic commodities, which they do not, it is axiomatic that we cannot control the total output of agriculture by controlling the acreage of crops which yield only one-fourth of our farm income. Obviously, it is unfair to the producers of the non-basic products to expect them to solve their own supply problems and to shoulder as well the supply problems shifted to them by producers of the basic commodities.

"The concept of adjustment through effective production control is impractical, as evidenced by a series of legislative and administrative actions: permission to plant on acres diverted from the basic crops, minimum national allotments, minimum individual allotments, legislative action to boost allotments or to prevent them from falling, and control on the basis of harvested instead of planted acres. The word 'adjustment' no longer appears in the titles of our farm bills. The most recent comprehensive piece of farm legislation is called simply 'The Agricultural Act of 1956.'

"Presently some persons recommend extending acreage controls to the feed grains and the oilseed crops, a step which would approximately double the number of acres under government control. Experience suggests that we should move away from acreage controls rather than toward more of them.

"Since we apparently cannot legislate scarcity, we must learn how to live with abundance. If any product is abundant, the need and the challenge are to build markets so that this abundance can be used. We cannot build markets by pricing ourselves out of them.

"Costs are showing up now because we report realized losses when

the commodities are disposed of, not when they were acquired. Many of the commodities we are now moving were acquired years ago. Costs are high because production was tremendously stimulated by a prolonged period of incentive prices—incentives supplied first by the market place and then by law. They are high because some of the output of supported products has been priced out of the market. They are high because production continues heavy despite acreage controls. They are high by comparison with previous times because we have been spared the wars which cut the costs of earlier liquidations.

"More study will be required before anyone can know all the changes that are needed and when they should be made. These decisions are the responsibility of the Congress, the legislative branch of the government. It is

our responsibility, as an executive department, to point out the difficulties of the laws we must administer and to counsel with the Congress regarding their solution.

"The Agricultural Act of 1954 was an improvement over the legislation which preceded it; it was a forward step. The price provisions for the basic commodities of that law have been helpful. But these benefits will largely disappear as soon as our stocks are moved or sharply reduced."

In a supporting statement that accompanied the letter Mr. Benson pointed out that certain weaknesses have appeared in the present price support laws. He said price supports based on parity have not proved a satisfactory single objective. The present price support levels have aggravated farmers' marketing problems, and acreage restrictions have failed to reduce farm output, Mr. Benson explained.

Production may continue to exceed market outlets at price objectives now specified by law, Mr. Benson said. Complications of program ad-

CROPLIFE, May 13, 1957—17

ministration are multiplied under the present program, he reported, and farm people have not received benefits from existing programs that they expected.

"We need to decide whether production controls can do the job," Mr. Benson said. "Special provisions result in overshooting the price target and overstimulating production." He pointed out that under present law, prospects for relaxation of acreage controls are dim.

### RESEARCH LABORATORY

ST. PAUL—The Minnesota Legislature has appropriated \$50,000 to permit planning of a \$300,000 crop research laboratory on the St. Paul Campus of the University of Minnesota. The departments of agronomy and plant genetics, plant pathology and agricultural botany, soils and agricultural biochemistry would use the laboratory for research on such things as improved crop production and fertilization practices and development of new crop varieties.

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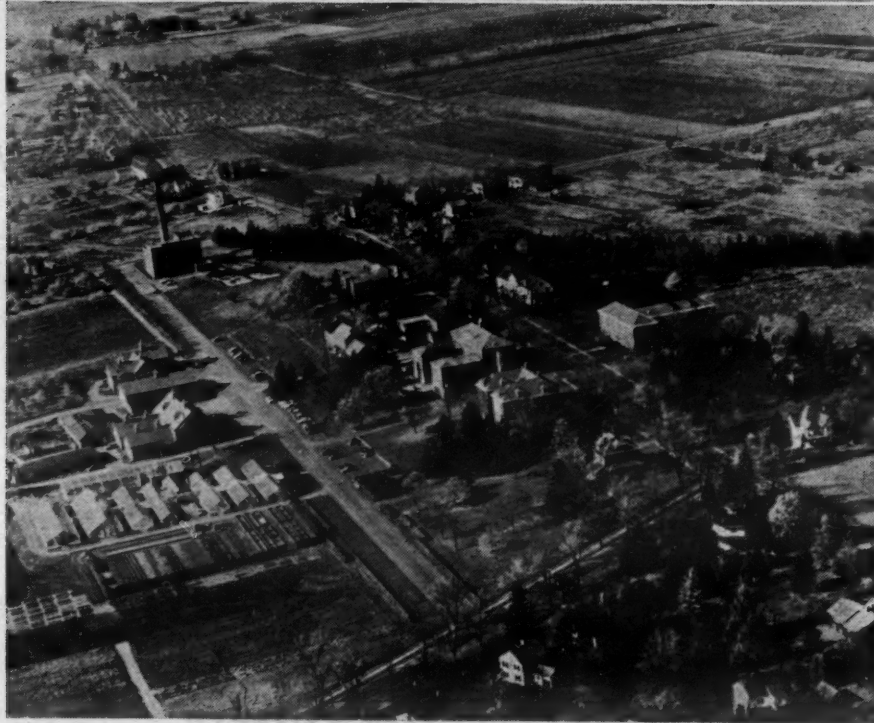
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**75-YEAR POINT OF VIEW**—In observing the 75th anniversary of its founding, the New York Agricultural Experiment Station at Geneva, N.Y. recalls some of the early days of its operation. Above is a photo of the station staff of 1886. Seated, left to right: F. E. Newton, stenographer; C. S. Plumb, first assistant; S. M. Babcock, chemist; M. H. Beckwith, assistant horticulturist; and E. Lewis Sturtevant, director. Standing, left to right, J. C. Arthur, botanist; E. S. Goff, horticulturist; C. W. Churchill, farmer; and E. F. Ladd, chemist. Despite the beards, fashionable then, most of these men were relatively young and were just embarking on their scientific careers. Mr. Babcock was later to achieve worldwide fame for his butter fat test which he perfected after leaving Geneva for the University of Wisconsin. Mr. Plumb became noted for his work in animal husbandry at Ohio State University. Dr. Arthur was renowned as botanist and plant pathologist at Purdue University. Dr. Ladd went from Geneva to the North Dakota experiment station and later to the U.S. Senate where he had a distinguished career as a "farm" senator. Mr. Beckwith was to become a cranberry expert at the New Jersey experiment station, while Prof. Goff's career was cut short by death soon after becoming horticulturist at the Wisconsin experiment station. Director Sturtevant retired to private life in 1887.

Under the old staff photo is the farm mansion acquired by the state in 1882, along with 130 acres of land. The director and his family lived on the upper two floors, while the first floor housed offices and laboratories. The building is still being used by the entomology department.

At the bottom is an aerial view of the 75-year-old station as it appears today. The State has provided four office and laboratory buildings, a central heating plant, greenhouses and other service buildings. A \$2,300,000 food science building and pilot plant has been authorized and it is hoped that work will start on the new installation this year. Land holdings have also expanded from the original 130 acres to over 600 acres in the immediate vicinity of Geneva.

## 75th Anniversary Observed by New York Experiment Station

By J. D. LUCKETT  
New York State Agricultural  
Experiment Station Editor

"The New York Agricultural Experiment Station was born out of the necessities of farmers."

Thus did Robert J. Swan, first president of the board of control of the New York Experiment Station express himself in his first report to the Legislature in 1882.

An agricultural experiment station had been authorized by the New York Legislature in 1880 "to promote agriculture in its various branches by scientific investigation and experiment." Technicalities raised by the state comptroller delayed action until the measure could be amended so that it was March 1, 1882, when Dr. E. Lewis Sturtevant, the first director, took possession of a farm home and 130 acres of land on the western outskirts of Geneva, and the New York Agricultural Experiment Station was in business.

For the first 43 years the station was administered by a board of control appointed by the Governor. In 1923, as part of a general reorganization of the state government, it became an integral part of Cornell University under the jurisdiction of the Dean of the College of Agriculture. With the establishment of the State University in 1948, the station and the college of agriculture together became a unit of that organization under contract with Cornell.

The station at Geneva now concentrates on research in the field of horticulture and supporting sciences, with special emphasis on processing and utilizing fruits and vegetables.

The farm scene has changed considerably over the years and with it the nature of the problems under investigation at the station. For one thing, only 4% of New York's population lives on farms today as compared with 44% when the station was established in 1882. The number of farms, too, has shrunk from about 241,000 in 1880 to less than half that number in 1950.

Mr. Swan in his first report spoke of the "hindrances and discouragements" that beset farmers. Among these he mentioned the ravages of insect pests, many of them of recent introduction, changes in the seasons with more frequent drouth, new and fatal diseases of crops, a multiplication of injurious weeds, and soil exhaustion. He also pointed out the need for more information on seed handling, on better varieties, on fertilizers, and on soil drainage and improved farm management.

We still have many of these problems with us, only they are different. Insects still ravage our fruit and vegetable crops, and new pests are turning up from time to time, as for example the Japanese beetle, the European corn borer, the Mexican bean beetle, and the European chafer, all within the past twenty-five years. And while vast advances have been made in the control of insect pests, the problem of resistance to pesticides is beginning to give growers and research workers alike concern about the future.

Likewise problems that were not foreseen in the early days, or were not recognized, are very much in the forefront today. These include virus diseases of fruits and vegetables which, at Geneva, are being met with an intensive program of breeding for resistance in the case of vegetable crops and of "indexing" scionwood for virus-free propagating stock in the case of fruits.

Nematodes, phylloxera, and other soil organisms, acute nutrient deficiencies that affect the development



A. J. Heinicke  
Present Director

of plants and the quality of the processed product, the whole concept of hardness, and the influence of climatic variations on plants open up new frontiers of knowledge to be explored to establish a scientific basis for solution of problems of a practical nature confronting the food industry.

Dr. Sturtevant recruited a staff of three scientists at the beginning and added three more before his retirement in 1887. The academic staff of the station now numbers 63 assisted by a group of 144 professional chemists, seed technologists, biologists, horticulturists, and nontechnical workers.

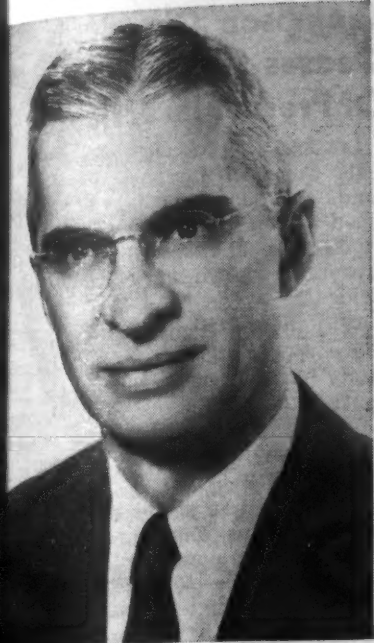
With a shrinking number of producers and reduction in the number of farm units, a much larger number of consumers are dependent upon economical and sound farm practices than ever before. The consumer has a stake in practically everything that is done at the experiment station today. Farmers and processors apply the findings of station research to their operations, but the consumer is the ultimate beneficiary with assurance of an adequate supply of high-quality, wholesome foods, at reasonable prices.

As further evidence of changing times, the culminating event in the observance of the 75th anniversary of the station is to be a symposium on Oct. 4 on "The Role of Agriculture in Changing Society." Deane Mallot, president of Cornell University, will preside and several top scientists have accepted an invitation to do a little crystal gazing into such things as the use of atomic energy for food processing, automation and agriculture, new food crops, the sociological aspects of agricultural research, and the industrialization of photosynthesis. Gov. Averell Harriman has also accepted an invitation to participate in the program.

One thing seems certain in the light of the past 75 years' experience, and that is that the theme chosen for the anniversary year of the New York State Agricultural Experiment Station, namely, "Agricultural Progress Through Scientific Research," will stand the test of time.

### CROP SURVIVES FROST

**SPARTANBURG, S.C.** — South Carolina's multi-million dollar fresh peach crop has apparently come through several late frosts without harm, agricultural authorities here have reported. Spartanburg County, with some 4 million trees, is the center of the state's peach industry.



George K. Schumaker

### George K. Schumaker Promoted to New Post with Velsicol

CHICAGO—The appointment of George K. Schumaker as manager, northeastern region, agricultural chemicals division, has been announced by Velsicol Chemical Corp. Roger W. Roth, manager of sales for the division, indicated that Mr. Schumaker would continue to headquarter at the company's New York office.

Mr. Schumaker joined Velsicol in 1951 as a regional sales representative in the Northeast. His area of responsibility will include the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Vermont, northern Virginia and the District of Columbia.

Mr. Schumaker holds degrees in entomology from Pennsylvania State College and the University of Illinois. In his new position, he will be responsible for coordinating Velsicol's sales activities pertaining to Chlor-dane, Endrin, Heptachlor and Methyl-Parathion insecticides.

### Toledo Fertilizer Business Unprofitable, Commissioner Says

TOLEDO—Arthur N. Niles, Toledo sewage disposal commissioner, has reported that Toledo's fertilizer business is a losing proposition.

The city has been manufacturing a fertilizer called Tol-E-Gro from sludge from its sewage operations since the early 1930's. Mr. Niles said that heavy maintenance costs involved in the four greenhouses in the Detwiler marsh area in which the sludge is dried make the project unprofitable.

Mr. Niles said that last year the city sold 516 tons of the fertilizer compared with 920 tons in 1953. It had a net profit of \$5,551, based on the cost of the manufacturing process alone, compared with \$7,622 in 1953.

Mr. Niles said this profit figure is misleading because it does not include the salaries of four watchmen who are employed on a 24-hour-a-day basis at the greenhouses as well as the cost of maintaining the greenhouses. If those costs were included, he said, the city is losing about \$17,000 a year.

### Tobacco Stands Poor in South Carolina

COLUMBIA, S.C.—Tobacco stands in South Carolina are poor due to disease, dry weather and flea beetle damage, the South Carolina Crop Reporting Service said recently. The plants are suffering effects of seed bed diseases, primarily blue mold.

Wheat and oat crops are in fair to good condition over the state despite the fact that mildew smut and rust have been prevalent in most sections.

### Olin Mathieson First Quarter Sales Down

SALTVILLE, VA.—Olin Mathieson Chemical Corp. has reported first quarter sales in the U.S. and Canada of \$135,479,249 and net income in this period of \$10,009,979, compared with sales of \$144,340,677 and net income of \$10,080,099 in the first quarter of 1956.

First quarter results were announced at the annual stockholders meeting by John M. Olin, chairman of the board, and Thomas S. Nichols, president.

Net income for the three months ended March 31, 1957 was equal to 75¢ per share of common stock on the average number of shares outstanding during the period. This compares with net income equal to 76¢ a share on the smaller average number of shares outstanding in the first quarter of 1956.

Directors elected at the annual meeting were Edward Block, Joliet,

Ill.; F. Stillman Elfred, Alton, Ill.; William C. Foster, Washington, D.C.; Benjamin H. Griswold, III, Baltimore; John W. Hanes, Millbrook, N.Y.; John C. Leppart, New York; Randle T. Moore, Shreveport, La.; Thomas S. Nichols, New York; John W. Olin, Alton, Ill.; Spencer T. Olin, Alton, Ill.; Fred Olsen, New Haven, Conn.; Stanley de J. Osborne, Essex, Conn.; Carleton H. Palmer, New York; Sinclair Richardson, New York; Laurance S. Rockefeller, New York; Robert G. Stone, Boston; Sam P. Wallingford, Wichita, Kansas; Frank T. Whited, Shreveport, La.; and Eugene F. Williams, Jr., St. Louis.

### DIAMOND APPOINTMENT

CLEVELAND — Appointment of Howard E. Everson to the position of chief staff engineer in Diamond Alkali Co.'s central engineering department was announced here recently by C. C. Brumbaugh, director of engineering.

### Edgar B. Chiswell Named Secretary of California Chemical

SAN FRANCISCO — Appointment of Edgar B. Chiswell as executive secretary of California Chemical Co. has been announced by G. L. Parkhurst, California Chemical's board chairman. Mr. Chiswell was formerly manager of process research and development for California Research Corp. and will now head the staff of the newly-formed company.

A native of Maryland, Mr. Chiswell joined Standard in 1937 as an assistant engineer at the Richmond labs. At the time he had just earned his Doctor of Science degree from Massachusetts Institute of Technology.

After 1937, he served successively as division supervisor of process design, chief design engineer and chief process engineer prior to becoming process manager.

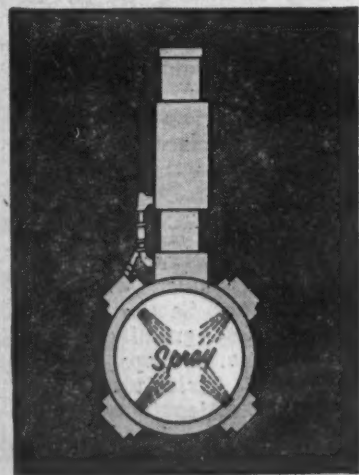


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JETROL, a Bemis-designed attachment for the new Bemis FERTILIZER PACKER, automatically sprays liquid insecticide *through* your fertilizer as it falls into the bag. JETROL measures exactly, diffuses thoroughly and minimizes toxic problems. You'll like its dependable performance.

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- Improved feeder design to insure maximum accuracy at higher speeds.
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- One- or two-man operation.
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## INSECT, PLANT DISEASE NOTES

(Continued from page 5)

clover has been general and results are good.

Armyworm moths have been increasing at the lights. Eggs should be hatching on the lower Eastern Shore. Check for armyworms in rank patches in grain fields.

It is time for flea beetle damage to potatoes and tomatoes; asparagus beetles are reported from the Upper Shore and spotted cucumber beetles are reported on early cucumbers.

At Hancock, red-banded leaf rollers started hatching on apple April 30. Unspotted tentiform leaf miner larvae were also found the last of April. Pests found the week before were rosy apple aphid, plum curculio, and European red mite. Petal fall sprays are now due.

Sawflies are infesting Virginia pine in Montgomery and Prince George's County. The green, black-headed larvae will be found wrapped around the needles, which they quickly devour. Chestnut oak trees on Sugar Loaf Mountain have been defoliated by fall cankerworms which are similar to measuring worms. Fortunately natural enemies are taking care of these worms and we do not recommend control operations except beside homes or in picnic areas.

Boxwood psyllids are infesting boxwood causing the cupping of new terminal growth. Rose aphids are abundant on some plantings.—Theo. L. Bissell and Wallace Harding.

### Grasshoppers Threaten as Predicted in North Dakota

FARGO, N.D.—The over-all grasshopper threat in North Dakota for 1957 remains unchanged over earlier predictions made by North Dakota Agricultural College entomologists following the fall egg surveys.

Recent rains over much of the state have brightened crop prospects and, if good growing conditions prevail, the grasshopper threat could be lessened. However, grasshoppers will still hatch in heavy numbers in many areas of the state, but with an abundance of lush foliage, it is much easier to live with the pest.

Nearly all species of grasshoppers of importance in North Dakota overwinter in the soil in the egg stage. These eggs are deposited in packets about 1 to 2 inches below the surface of the soil. The females like to place their eggs in uncultivated land, roadsides, fence rows, etc. As the soil warms this spring, these tiny eggs will begin to incubate. Look for the first young grasshoppers in the lighter sandy soils about May 20.

### Kansas Makes Count of Spotted Alfalfa Aphids

MANHATTAN, KANSAS—Although few in number, winged spotted alfalfa aphids were found for the first time in Kansas this year in Chautauqua, Montgomery, Bourbon and Greenwood counties. Aphid populations are increasing in most of the southeastern counties but are nowhere near economic levels at this time. Counts ranged from 3 to 200 per 25 sweeps; however, wet and muddy fields prevented extensive sweeping. Counts made by brushing plants over the net ranged from 1 to 70 per sample. No spotted alfalfa aphids were found in Northwestern Kansas counties this week.

In southeastern counties, pea aphid populations were generally low; however, several localized areas in Chautauqua, Montgomery, Labette, Neosho, and Wilson counties had counts as high as 5,000 per 25 sweeps. Pea aphids are not present in Northwest Kansas counties at the present time.

Grasshopper nymphs probably *Melanoplus* spp., were found at most

cropland survey stops in Southeast Kansas. Range stops in the area showed a few of the range species hatching. Counts ranged from 1 to 7 per 25 sweeps in most southeastern counties.

Leafhoppers were swept from one alfalfa field in northwest Sumner County. Counts averaged 3 per 100 sweeps. This is the first record for Kansas this season.

Clover leaf weevil larvae were found in most fields of alfalfa that were surveyed in the southeastern area of the state. Counts ranged from 1 to 8 per square foot with about 25% of the larvae showing fungus disease.

English grain aphids were found in all wheat and barley fields that were surveyed. Counts ranged from 4 to 300 per 25 sweeps. Populations are higher for this time of the year than any of the four previous springs, and aphids are already feeding on newly emerged heads in a few southern counties.—Dave Matthew and Dell E. Gates.

### Damage to Forage Noted in Iowa Report

AMES, IOWA—Clover leaf weevils have ganged up on less vigorous red clover and alfalfa stands to cause severe damage in recent weeks, according to Harold Gunderson, Iowa State College extension entomologist. He added that visible crop damage is extremely variable over a wide area. But the weevil problem is reported to be generally prevalent in most of Lee County and in the northwestern half of Marion County.

Dr. Gunderson said Lee County extension director Robert Dowling reports that about 20% of the alfalfa and red clover fields in that county are infested. The extent of weevil damage varies from severe to moderate in individual fields. Most vulnerable are fields where low fertility has retarded normal plant growth in established stands of red clover and alfalfa.

Spot checks in other areas throughout eastern Iowa also show that the vigor of a particular stand seems to be more of a factor than numbers of weevil larvae present. In some areas, for example, upwards of 20 weevil larvae were found per plant. In spite of this comparatively high level of infestation, however, very little leaf-feeding damage was noted where plant growth was vigorous. By contrast, severe leaf-feeding damage was noted in neighboring fields where only 4 to 6 weevil larvae were found per plant. But fertility was poorer and plant vigor and growth were noticeably retarded, Dr. Gunderson explained.

He advised farmers to consider spray treatment if inspection of established red clover and alfalfa seedlings showed severe leaf-feeding damage.

### Delaware Warns Against Many Insect Species

NEWARK, DEL.—Adults of European wheat stem sawfly common on barley in Milford area. European corn borer moths abundant in and near fields of corn refuse at Georgetown.

Alfalfa weevil damage is heavy at most places in New Castle County to severe in Sussex and most of Kent. Near total loss noted at several locations in the Bridgeville-Greenwood area. Do not delay treatments in northern portion of the State.

Lesser clover leaf weevil adults are common generally. Nymphs of rapid plant bug and meadow plant bug are common in Kent and Sussex counties.

Potato and tobacco flea beetles are numerous on early potatoes from Mid-dletown southward. Colorado potato

beetle adults are feeding and depositing eggs in the Georgetown area. Three-lined potato beetle adults are feeding on potatoes west of Ellendale.

Bean leaf beetle is destructive on early snap beans at Bridgeville and pea aphids are occurring on commercial plantings of peas.

Holly leaf miner has been emerging for several days in southern Delaware and emergence will soon begin in New Castle County.

### Aphid Does Little Damage in Utah

LOGAN, UTAH—Little damage by the spotted alfalfa aphid has been noted in Southern Utah so far this season, according to Dr. George F. Knowlton, extension entomologist. He said that the pest had become damaging by this time in the past two seasons, but this does not mean that the pest will not become destructive later in the season, he added.

An investigation of every alfalfa field in Washington County revealed the presence of aphids in every field. However, in only a few local areas was it abundant enough to cause damage at this time. In many alfalfa fields the pea aphid was more abundant and threatening than was the spotted alfalfa aphid, he said.

Spotted alfalfa aphid was found to be rare in Kane County. It was not observed in any fields farther north than Washington and Kane counties during the survey.

### Pea Aphids, Cutworms In South Dakota Report

BROOKINGS, S.D.—Pea aphids are showing up in alfalfa in eastern counties, and pale western cutworms have been observed in winter wheat in the central part of the state. In one field being damaged they averaged about four per foot of row. The wheat was disappearing fast on the south and west slopes of the higher ground in the field.

These cutworms are light in color and the head is light brown with two dark arcs on the front of the head. They feed entirely below the surface of the ground.—John A. Lofgren.

### Armyworms Attack In Mississippi Area

STARKVILLE, MISS. (Via Western Union)—Armyworms in the Delta area of Mississippi were reported on May 8 to be attacking small grain, and control measures in the form of airplane application were being carried out.

According to A. G. Bennet, leader in extension entomology at Mississippi State, armyworms were also reported in the hills.

Other developments in the state included cotton damage by cutworms. Farmers were applying pesticides and were watching for further infestations of these pests as well as for expected heavy movement of thrips into late-planted cotton fields.

### North Carolina Pests Attack Trees and Crops

RALEIGH, N.C. (Via Western Union)—Elm leaf beetles are doing damage in the Raleigh area and entomologists are urging treatment for their control, according to H. E. Scott. He reports also that spider mites on strawberries are causing damage to both old and new plantings in the area.

In the mountain areas, cicadas are damaging young orchard trees.

### WEED RESEARCHER

NEW BRUNSWICK, N.J.—Dr. William F. Meggitt has been appointed research agronomist with the Weed Investigations Section of the U.S. Department of Agriculture with an office in the farm crops department of the College of Agriculture, Rutgers University. Dr. Meggitt will have special responsibilities for studying weed problems in horticultural crops.

## Thompson Chemicals Ceases Production Of Present Insecticides

LOS ANGELES—Thompson Chemicals Corp. of Los Angeles and St. Louis said last week that it "had decided to withdraw entirely from the production and distribution of the presently known agricultural insecticides."

William T. Thompson, president of the corporation, said that "a 12-year study has convinced us that the currently known and used broad spectrum insecticides are at best palliative and may prove dangerous in the long run."

He said that study by the firm "convinces us that any sound approach to the control of agricultural pests must be sought in chemical mechanisms that are selective between the insect pest and the beneficial insects. The study of physiologically and ecologically selective mechanisms must be the primary concern of research. Our future in the field of insect control of agricultural pests will be in the exploration of selective insecticide chemicals."

The firm said that it will continue its activities in the production and distribution of selective and general brush and weed killers, crop desiccants, penta products, plant hormones, plant growth regulators, livestock insecticides, small package home and garden chemicals, emulsifiers, and other chemical products for industry and agriculture.

## ROAD PROGRAM

(Continued from page 1)

meal type fertilizers, and only three states prefer organic nitrogen to inorganic sources.

Hydraulic application of fertilizer and seed or fertilizer and mulch is making converts, with 20 states reporting use of such a facility. Areas in the humid region use lime to reduce soil acidity and most states prefer an agricultural ground limestone for this purpose.

Some states are beginning to use soil testing as a guide to fertilization, but the majority follow a local, standard fertilizer treatment without guidance of a test.

The rate of application per thousand square feet as reported varied from 9.2 to 30 lb. of complete fertilizer.

The lack of uniformity as to grades of fertilizer, rates of application, method of placement or application or soil testing prior to fertilizing and liming emphasizes the need for the proposed educational campaign, the committees stated.

They conclude that the most efficient and economical way to maintain a turf is to "build maintenance in it at the start," and that road contractors should be held responsible for establishing permanent roadside turf, and recognize the fact that more than one growing season may be required.

Both committees conclude that "successful roadside turf establishment and maintenance can be achieved only through a close working relationship between the road contractors, the state agricultural colleges and the fertilizer, seed and nursery interests working with state landscape authorities."

The committee pointed out that the new 41,000 mile interstate highway system will have over 1,000,000 acres of roadside area susceptible to landscape treatment, including turf, ground cover or woody cover of trees and shrubs, for which between 250,000 and 400,000 tons of fertilizer could be used effectively for the initial establishment of turf and shrubbery and about 125,000 tons would be needed annually for proper maintenance.

## SOIL BANK

(Continued from page 1)

from the basic crops in the soil bank to other substitute crops.

Such evidence from official sources competent to appraise indicates that the market for plant foods and pesticides may not be materially reduced except in the instance of tobacco. Here the maximum use of plant foods is generally attained and tobacco acreage allotments have been cut to the bone this year. Also another factor in the tobacco country is that there are few substitute crops available.

An example of the operation of the soil bank demonstrates the correctness of concluding that soil bank operations will be an insignificant factor in plant food and pesticide sales this year.

On a wheat farm of 320 acres, whose owner desires to participate in the soil bank, this is about the way the plan would operate:

In wheat country the farmer generally would keep half of his wheat acreage or 160 acres in summer fallow. To comply with the soil bank to obtain its payments, he is expected to put 80 acres of his normal summer fallow land into the bank and possibly as much as 80 acres of his normal annual wheat acreage into the soil bank. However on the normal annual wheat acreage which is contributed to the soil bank it is expected that he will plant on this land substitute crops suitable to the region where his farm is located.

In western Kansas for example, he would probably plant grain sorghums on the normal annual wheat land put into the soil bank. In the Pacific Northwest, the substitute crop would probably be barley.

This condition probably is emphasized in wheat acreage phase of the soil bank but for other crops such as corn and cotton similar possibilities exist to a lesser degree to the producer.

In the corn belt, particularly the outlying regions of the old corn belt, grain sorghums would be a suitable and profitable crop to be planted on corn acreage put into the soil bank acreage reserve program to gain soil bank payments.

It may be discerned without too much difficulty that the soil bank is little less than a bounty to the farmer participating since he gets assured payments for the land committed to the soil bank, but he also obtains income from the substitute crop planted on the corn acreage going into the bank.

The soil bank will work ideally only in areas where there are limited or few possibilities for substitute crops on soil bank land. For the major field crop areas the soil bank is a bounty payment swelling the farmer income by its minimum guarantee of return on his soil bank acreage plus the cash value of the substitute crop.

The soil bank depositor farmer can hardly plead shortage of money to buy plant food materials and pesticides this year. In fact, he probably has never been in a better position to learn the real value of optimum use of these products at the expense of the government.

The farmer in many instances will probably be experimenting with new crops for his part of the farm economy. For example, in the wheat and corn belt the expansion of sorghum acreage indicates a highly profitable new crop potential in the new hybrid seed which has been developed. Introduction of plant foods and adaptation of pesticidal chemicals will require that the formulators and dealers will have to sharpen their sales tools to meet this condition.

But for the longer run the soil

bank money and the cash income from the substitute crops may fatten the farm purses at the close of the harvest and prepare the farm community as a receptive audience for purchases of plant foods for fall use this year. It must be remembered that the soil bank payments are made on basis of compliance with the soil bank regulations of the contract. For that part of his crop income, the farmer does not have to hold back commitments for farm improvement because of lack of cash as he might if he held his crop until a more favorable market price after harvest.

That might indicate that an alert dealer may see the possibility of cash sales for reasonable discounts to fall buyers of plant foods.

In the cotton economy, particularly in the southeast where livestock has been taking over from land unsuited to cotton, this same opportunity exists for sales through this new cash income of the soil bank. In the southeast the soil bank has an attraction for not only the acreage reserve substitution of such other field crops as corn on cotton land, but also the income obtained from cover crops which will be developed on land placed in the conservation reserve phase of the bank.

**This conservation reserve phase is a lower payment proposition and is available only on long term contracts but since its basic goal is to develop good cover and pasture crops, only the short-sighted farmer would fail to sense the need of development of good pasture land once he has made his commitment to the soil bank.**

However these changes which the soil bank may bring about in the farm belt will require custom-made sales plans by states and by areas

within states and probably will not respond effectively to any formal overall sales pattern either for plant food materials or pesticidal chemicals.

For instance, some of the changes noted are those which got impetus several years ago. An example is the expansion of corn production outside the old corn belt and the development of soybeans as a profitable cash crop in the southeast as in Southeastern Alabama and up the Atlantic Coast into North Carolina. Corn is an expanding crop in the East Coast states and this expansion may be accelerated under soil bank condition on land which is taken out of cotton and where corn is used as a substitute crop.

It is pointed out that the manufacturer promoting the use of his basic materials, the dealer, the formulator and others in the sales and distribution end of plant foods and pesticides must study their sales area and take into consideration the shift of requirements as indicated by the new crops and the substitution of other crops on land put into the soil bank.

**The only certain ingredient in this equation is the cash money in the farm pocketbook when the soil bank payments come in.**

While there may still be sales opportunities this year in exploring these new regions of opportunity, it is likely that the soil bank money plus the cash income from the substitute crops will provide the purchasing wherewithal for next year's supplies of these materials.

## Stauffer Product

SAN FRANCISCO—Stauffer Chemical Co. has announced that it is manufacturing a paste form of 2,4-D for marketing in the North Central and Pacific Northwest states. The firm anticipates national sales later this season.



Anthony G. Grady

## Sinclair Appoints Two in Nitrogen Products Division

NEW YORK—Sinclair Chemicals has announced two appointments in its Nitrogen Products Division.

Anthony G. Grady has been named national accounts representative of the division, and Benjamin T. Anderson has been named technical service engineer. Both will be stationed at Sinclair's Chicago office.

Mr. Grady was graduated from the University of Connecticut, with a major in biology and botany, and received his bachelor of science degree in entomology. He began his career with Rohm & Haas Co. prior to joining Sinclair in 1928. While at Rohm & Haas, he collaborated with the late Dr. Peet in developing a method for testing insecticides known



Benjamin T. Anderson

as the "Peet-Grady Test." While at Sinclair as chief entomologist, he received several citations for outstanding work in the field of entomology.

Mr. Anderson's primary function will be to furnish technical assistance to fertilizer manufacturers and industrial consumers of Sinclair nitrogen solutions and anhydrous ammonia from the new nitrogen products plant at Hammond, Ind.

A native of East St. Louis, Ill., Mr. Anderson graduated from McKendree College in 1950 with a bachelor's degree in chemistry and he also attended the University of Illinois graduate school.

Mr. Anderson was formerly with the Illinois Farm Supply Co. as chief chemist and later in the research and development department, assisting in the development of the calcium meta-phosphate mixed fertilizer process and in charge of pilot plant operations utilizing this process.

## SCREW-WORM

(Continued from page 1)

uniform distribution in the test area.

A 400-per-square-mile rate proved adequate for eradication of the fly on Curacao. The area to be treated, 40 by 50 miles, is located east and south of Orlando, and has been found to be heavily infested with the screw-worm.

Eradication of the screw-worm by the method involved in the Florida research is based on the fact that when normal females of the species mate with sterile males, the eggs produced will not hatch. If enough sterile male flies can be introduced into a screw-worm infested area at proper intervals, they will cause a progressive reduction in the laying of fertile eggs, and the fly population eventually will be wiped out, USDA said.

Sterile flies in the 1957 investigations will be dispersed from aircraft flying a pattern found to be successful in Curacao. The planes will carry relatively light loads of the sterilized male insects which will be dispersed at relatively high altitudes—generally about 1,000 feet—at intervals of 1 mile or more. The area to be covered is largely lightly populated range land. Standard surveying techniques on the ground, including checking of animals, will be used to determine results of the work.

The state of Florida, through the State Livestock Board, is cooperating with USDA in the 1957 tests, and is furnishing about \$22,000 to help finance the federal-state operations. The federal government, through the Agricultural Research Service, is supplying technical personnel as well as materials and facilities.

Headquarters of the operation will be at Orlando, and flying will be done from a nearby air-strip by contract planes. The field research will be in charge of the same USDA officials who have conducted the laboratory investigations on screw-worm. It will be directed by R. C. Bushland of the Entomology Research Division, Kerrville, Texas.

USDA officials emphasized that the pilot project is not an all-out eradication program.

## American Potash Sales Show Gain In First Quarter

LOS ANGELES—Sales of American Potash & Chemical Corp. for the three months ended March 31, 1957, showed an increase of \$1,453,371 over the corresponding period a year ago, Peter Colefax, president, said at the annual meeting of the company's shareholders.

Net sales of \$10,949,299 for the quarter ended March 31, 1957, compared with \$9,495,928 for the first three months of 1956.

Net income for the first quarter of this year, after all charges, amounted to \$1,271,631, equal, after preferred dividends, to 64¢ a share on the 1,903,995 shares of Class A and Common stock now outstanding. This compared with earnings for the first quarter 1956, of \$1,194,908, equal, after preferred dividends, to 70¢ a share on the 1,634,378 shares then outstanding, after adjusting for the two-and-one-half for one stock split effected April 25, 1956.

Present directors were reelected at the stockholders' meeting.

The directors have declared a quarterly dividend of 25¢ a share on the Class A and Common stocks. They also have declared the quarterly dividend of \$1 a share on the \$4 cumulative preferred stock, Series A. The dividends are payable June 14 to shareholders of record May 31, 1957.

# Croplife

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Northeastern states.

## Atomic Energy to Bring Changes to Agriculture

Peacetime uses of atomic energy have been directed to so many areas that it is almost commonplace to see its influence in various industries. Its application to agriculture continues to remain rather uncertain, beyond being a useful role as a laboratory tool, and many people in the agricultural trades are keeping their eyes and ears open for indications of further significant applications.

Prof. H. B. Tukey of Michigan State University's horticultural department, in a recent statement, pointed out some of the areas in which atomic radiation may be of use in agricultural pursuits. It may be used in pasteurization and sterilization, as well as for insect and disease control, he said. He reminded that already radioactive tracer atoms are being used widely to discover new facts about plant and animal physiology and water improvement.

"Atomic power will bring increased quantities of water if used to tap such sources as the great lakes or to desalt sea water. With it, synthetic fertilizers might be made more abundant and cheaper, while synthetic foods may be created. Transportation should be less costly and speedier with the application of atomic power," he pointed out.

"Concrete laboratory evidence on the application of atomic energy to the creation of animal feeds has already been found. LeMar Remmert, chemist at the Oregon State College, has reported that the cellulose in sawdust exposed to high-level beta and gamma rays (which result from atomic fission, or which can be created electrically) undergoes chemical change which permits digestive enzymes of cattle to convert the material into usable body sugar. The work has so far been carried out only in laboratory experiments."

Industry is also doing extensive research in peacetime use of atomic energy. Significant changes in manufacturing and products will undoubtedly result and greatly affect both agriculture and life in general.

There are many potential advantages in the use of atomic radiation in chemistry. The tremendous energy of atomic particles (which can be millions of times greater than the energy involved in a normal chemical reaction) can blast apart or blast together molecules in reactions which can now be accomplished only under great pressure, with great heat, or in the presence of catalysts.

If such reaction can be achieved through bombardment with high-energy radiation or atomic particles, it might avoid contamination which can result from catalysts.

## Poison Centers in Various States Listed

As a service to the pesticide industry, Croplife is publishing elsewhere in this issue, a directory of poison information centers in various states where doctors familiar with antidotal methods for various types of poisoning may be reached on an emergency basis, day or night. It is suggested that dealers should clip out this feature and keep it at hand for quick reference should such action become necessary.

The poison centers for the most part were set up primarily for the purpose of advising in cases where children might have eaten any one of various household items and endangered themselves. Local physicians might know the precise antidote for common hazards such as ingestion of aspirin, shoe polish, furniture polish, paint, etc., but at the same time could be uncertain about emergency treatment for pesticides. During the season of heavy use of these products, it is well for all physi-

cians to know that they do not have to face such emergencies alone . . . that there are experts readily available who can give verbal instructions via telephone and perhaps save a life.

The names, telephone numbers, and locations of these centers presented in this and subsequent issues, were compiled by the National Agricultural Chemicals Assn., Washington, D.C. and have been given wide distribution over the country. We feel that this information, in the hands of additional dealers, provides another dimension to the safety picture.

A season with zero number of accidents is of course the goal earnestly sought by the industry. Any degree of progress in this direction is of importance to all concerned: the manufacturer, distributors and dealers, and, of course, the users.

## 75th Anniversary For New York Station

When one considers the vast technological changes that have taken place in agriculture during the past decade or so, a new perspective is given to the 75th anniversary being observed in 1957 by the New York Agricultural Experiment station at Geneva.

This station, of which pictures and a brief written history appear elsewhere in this issue of Croplife, has been in a position not only to observe the great advancements in crop-raising techniques over the past three-quarters of a century, but also to contribute to these developments.

The original director of the station, Dr. E. Lewis Sturtevant, had a staff of three scientists at the outset. The academic staff of the station now numbers 63, assisted by a group of 144 professional chemists, seed technologists, biologists, horticulturists, and non-technical workers.

Significant changes have taken place also in the agricultural economy of New York State during the past 75 years. When the station began operations in 1882, 44% of the state's population was on the farm. Today, the proportion is only 4%. The number of farms has shrunk from about 241,000 in 1880 to less than half that number in 1950.

The New York station will hold a symposium on "The Role of Agriculture in Changing Society" next October. Prominent names in the agricultural world will participate in this event which is slated to mark officially the anniversary of the station's founding.

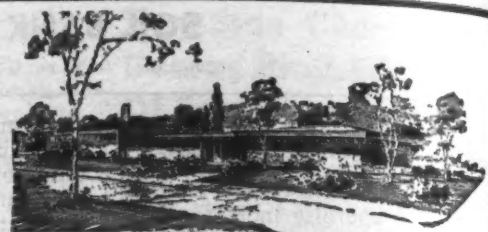
A salute to this forward-looking organization on its 75th birthday!

## Quote

"I would caution against delaying tax reduction too long on two grounds: first, because there will be an inevitable tendency for increased expenditures to nibble away at the larger tax receipts which growth will provide; second, because the longer tax rates remain at their present levels, the more likely it is that they will cut down on our growth potential."—J. Cameron Thomson, Chairman of the Board, Northwest Bancorporation, Minneapolis.

## Quote

"Safety makes sense in more ways than one. For accidents steal time and income, not only from individuals, irrespective of their vocation or status, but from business institutions, government agencies, and all groups and organizations, whatever they may represent or strive to achieve. Inefficiency and human misery and all that these unhappy words connote are among the inevitable end-products of failure to prevent accidents."—Arthur D. Weber, acting president, Kansas State College, in farm safety talk, April 30, 1957.



Croplife's Home Office

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CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is \$5 for one year (\$8 a year outside the U.S.). Single copy price, 25¢.

LAWRENCE A. LONG

Editor

DONALD NETH

Managing Editor

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# MEETING MEMOS

July 11-12—Great Plains Anhydrous Ammonia Meeting, Kansas State College, Manhattan, Kansas.

Nov. 17-19—National Fertilizer Solutions Assn., Annual Convention, Netherland-Hilton Hotel, Cincinnati, Muriel F. Coolie, 2217 Tribune Tower, Chicago 11, Ill.

1958

July 18-19—Southwest Fertilizer Conference and Grade Hearing, Buccaneer Hotel, Galveston, Texas.

EDITOR'S NOTE—The listings above are appearing in this column for the first time this week.

May 13-15—Carolinas-Virginia Pesticide Formulators Assn., Third Annual Spring Convention, Cavalier Hotel, Virginia Beach, Va., W. R. Peele, Raleigh, N.C., Secretary-Treasurer.

May 14—Tour of Pacific Northwest Plant Food Assn. Farm Demonstration Project at Hillsboro, Ore.

May 17-18—School for Chemical Analysts in Industry and State Laboratories, Purdue University, Lafayette, Ind. Sponsored by National Plant Food Institute.

May 19-21—Florida Seedsmen's Assn., Roney Plaza Hotel, Miami Beach, Fla.

May 20-21—National Cottonseed Products Assn., 61st Annual Convention, Shoreham Hotel, Washington, D.C.

May 20-22—Chemical Specialties Manufacturers Assn., Drake Hotel, Chicago.

June 6-8—Manufacturing Chemists Assn., Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W.Va.

June 9-12—National Plant Food Institute, annual meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 17-19—Fifteenth Annual Convention of the Association of Southern Feed and Fertilizer Control Officials, Dinkler-Tutwiler Hotel, Birmingham, Ala., Bruce Poundstone, Kentucky Agricultural Experiment Station, Lexington, Ky., Secretary-Treasurer.

June 18-20—Pilot Plant Demonstration of Developments in Fertilizer Technology, Tennessee Valley Authority, Wilson Dam Laboratories, Sheffield, Ala.

June 23-26—American Society of Agricultural Engineers, Golden Anniversary meeting, Michigan State University, East Lansing, Mich.

June 24-28—Eighth Annual Fertilizer Conference of the Pacific Northwest, Benson Hotel, Portland, Ore. B. R. Bertramson, Washington State College, Pullman, Wash., chairman.

June 26-28—Pacific Branch, Entomological Society of America, 41st Annual Meeting, Multnomah Hotel, Portland, Ore., H. H. Kelfer, 1112 Swanston Drive, Sacramento 14, Cal., Secretary-Treasurer.

July 4-5—Alabama Seedsmen's Assn., Battle House, Mobile, Ala.

July 10-14—Plant Food Producers of Eastern Canada, Manoir Richelieu, Murray Bay, Quebec.

July 17-19—Southwestern Fertilizer Conference and Grade Hearing, Galvez Hotel, Galveston, Texas.

Aug. 13-14—Ohio Pesticide Institute, Summer Meeting, Ohio Agricultural Experiment Station, Wooster, Ohio, J. D. Wilson, Ohio Agricul-

tural Experiment Station, Secretary.

Aug. 14—Connecticut Agricultural Experiment Station Field Day, Mt. Carmel, Conn. Dr. James G. Horsfall, New Haven, director.

Aug. 28-31—Soil Conservation Society of America, Annual Convention, Asilomar, Cal.

Sept. 5-6—Great Lakes States Anhydrous Ammonia Meeting, Michigan State University, East Lansing, Mich.

Sept. 8-15—International Congress of Crop Protection, Hamburg, Germany.

Oct. 2-4—Eleventh annual Beltwide Cotton Mechanization Conference, Shreveport, La.

Oct. 3-5—Pacific Northwest Plant Food Assn., Annual Convention, Sun Valley, Idaho, Leon S. Jackson, Lewis Bldg., Portland 4, Ore., Secretary.

Oct. 14—Sixth Annual Sales Clinic of the Salesmen's Assn., American Chemical Society, Hotel Roosevelt, New York.

Oct. 17—Conference on Chemical Control Procedures for Industry Chemical Control Analysts, Shoreham Hotel, Washington, D.C. Sponsored by National Plant Food Institute.

Oct. 29-30—Seventh Annual Northwest Garden Supply Trade Show of Oregon Feed & Seed Dealers Assn., Portland, Ore. Masonic Temple.

Oct. 29-31—Entomological Society of Canada and Entomological Society of Alberta, Annual Meetings, Lethbridge, Alberta.

Nov. 3-5—California Fertilizer Assn. 34th Annual Convention, St. Francis Hotel, San Francisco. Sidney H. Bleriy, General Manager, 475 Huntington Drive, San Marino 9, Cal.

Nov. 6-8—Fertilizer Industry Round Table, Sheraton Park Hotel, Washington, D.C.

Dec. 1-3—Southern Seedsmen's Assn., Jung Hotel, New Orleans.

Dec. 2-5—Entomological Society of America, 5th Annual Meeting, Hotel Peabody, Memphis, Tenn., R. H. Nelson, 1530 P St., N.W., Washington 5, D.C., Executive Secretary.

Dec. 2-5—Cotton States Branch, Entomological Society of America, 32nd Annual Meeting, Hotel Peabody, Memphis, Tenn., M. E. Merkl, Box 202, Leland, Miss., Secretary-Treasurer.

Dec. 11-13—Agricultural Ammonia Institute, Seventh Annual Meeting, Hotel Marion, Little Rock, Ark., Jack F. Oriswell, Claridge Hotel, Memphis, Executive Vice President.

Dec. 12-13—Beltwide Cotton Production Conference, Hotel Peabody, Memphis, Tenn.

1958

Jan. 7-8—Texas Fertilizer Conference, Texas A&M, College Station, Texas.

Jan. 13-15, 1958—Weed Society of America and Southern Weed Conference, joint meeting, Peabody Hotel, Memphis, Tenn.

Jan. 21-23—California Weed Conference, San Jose, Cal.

Feb. 13-14—Agronomists-Industry Joint Meeting, Edgewater Beach Hotel, Chicago, sponsored by the Middle West Soil Improvement Committee, Z. H. Beers, 228 N. LaSalle St., Chicago 1, Ill., Executive Secretary.

March 4-5—Western Cotton Production Conference, Hotel Cortez, El Paso, Texas, Conference Sponsored by the National Cotton Council and the Five State Cotton Growers Assn.

## Court Decision Made In Florida Suit

MIAMI, FLA.—A decision in the civil suit in U.S. District Court, Miami, in the case of Inglett & Corley, Inc., vs. Everglades Fertilizer Co., Inc. involving a certain bagging equipment patent, was recently made by Judge Joseph P. Lieb.

According to a transcript of the court order furnished by Julian A. Blake, clerk of the district court in Miami, Judge Lieb issued an order granting summary judgment for the defendant.

The signed order stated that "there is no genuine issue as to any material fact and that as a matter of law, plaintiff's patent is invalid by virtue of prior public use, defendant is entitled to judgment as a matter of law."

Richard Spencer of Stamford, Conn., counsel for Inglett & Co. (formerly Inglett & Corley, Inc.) has advised that an appeal has been taken from Judge Lieb's decision on the motion in this suit.

Inglett has pending a similar suit in Virginia. In this case, the Federal Court refused a motion by the defendant for a summary judgment, but instead, the case was tried on its merits. No decision has yet been handed down.

## Plant Resistance Study

DAVIS, CAL.—A new approach to future development of disease- and insect-resistant crop plants is being expanded at the University of California, Davis, through a Herman Frasch Foundation grant of \$10,000 annually. The five-year grant from the foundation, set up to encourage research in agricultural chemistry, will enable plant scientists on the Davis campus to step up their search for chemicals produced in plants that enable them to fight off disease and insect attacks. Frederick P. Zscheile, Jr., professor of agronomy, is in charge of the project aimed at finding out what these chemicals are and how different growing conditions of temperature, light and humidity affect their production in plants.

# INDEX OF ADVERTISERS

The index of advertisers is provided as a service to readers and advertisers. The publisher does not assume any liability for errors or omissions.

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Allied Chemical & Dye Corp.	Larvacide Products
Nitrogen Division	Merck & Co.
American Potash & Chemical Corp.	Meredith Publishing Co.
American Potash Institute	Miller Publishing Co., The
Anco Manufacturing & Supply Co.	Mineral & Chemical Corp.
Armour Fertilizer Works	Mississippi River Chemical Co.
Ashcraft-Wilkinson Co.	Monsanto Chemical Co.
Atkins, Kroll & Co.	National Potash Co.
Baughman Manufacturing Co., Inc.	Naugatuck Chemical Div., U. S. Rubber Co.
Beard, J. B., Co.	Niagara Chemical Division, Food Machinery & Chemical Corp.
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Kay Dee Feeds	
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## Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.  
Rates: 15¢ per word; minimum charge \$2.25. Situations wanted, 10¢ a word; \$1.50 minimum. Count six words of signature, whether for direct reply or keyed care this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Commercial advertising not accepted in classified advertising department. Advertisements of new machinery, products and services accepted for insertion at minimum rate of \$10 per column inch.  
All Want Ads cash with order.

### SITUATIONS WANTED

PRESIDENT, AGRICULTURAL CHEMICAL manufacturing company, with 15 years' experience, research development, sales and management, desires position in management or sales in a foreign field. Experience in South America and Africa. Chemistry, entomology, plant pathology, doctorate training. Address Ad No. 2710, Croplife, Minneapolis 1, Minn.

## FOR FAST ACTION AND RESULTS

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# Croplife's

## CLASSIFIED ADVERTISING

### AP&CC SUBSIDIARY

LOS ANGELES—American Potash & Chemical Corp. has announced the formation of a new subsidiary, San Antonio Chemicals, Inc., for which a \$750,000 plant has been constructed at San Antonio, Texas. The SAC facility is located next to another AP&CC subsidiary, American Lithium Chemicals, Inc. The new company will process end liquors resulting from ALC lithium hydroxide manufacturing processes to produce a mixed alkali salt, Alkarb, composed of the metal carbonates of potassium, rubidium, cesium, sodium and lithium.

there is only

1

NEWSPAPER



## Serving the Agricultural Chemical Industry ...

Croplife is the weekly newspaper for all phases of the industry from the manufacturers of basic chemicals down the production and distribution chain through the retail dealers. Croplife reaches *all* the key men in the industry. These groups are reading Croplife:

- Fertilizer manufacturers, mixers and suppliers of fertilizer ingredients
- Formulators of Pesticides, Herbicides and other Farm Chemicals
- Retail Dealers selling fertilizer, farm chemicals and other farm supplies; Custom Sprayers, Pest Control Operators, and Nurserymen
- Farm Advisor Group—county agents, agriculture department officials, extension and experiment station personnel, soil conservation men, bankers and consultants

Croplife, with a publishing schedule every 168 hours, is reporting news to the industry while it's still news! A staff of 21 crack newsmen in key U.S. cities and backed by 100 special correspondents provides the stop-press coverage of the industry required by readers who make the command decisions.

Croplife's unique distribution plan permits advertising (1) on the national level to the manufacturing core of the industry, and (2) on the regional basis to the marketing segment of the market. Ask a Croplife representative to elaborate on this in terms of your product!

Your advertisement in Croplife will share the *impact* and *import* of Croplife as it reports weekly to the men who create action in the agricultural chemical field.

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